



# **Peace AirShed Zone Association**

## **Ambient Air Monitoring Network Summary**

**Continuous Ambient Air Quality Monitoring Program  
Monthly Report  
August 2009**

**Operations and Reporting**  
**FOCUS**  
AIR QUALITY MONITORING



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September 29, 2009

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**RE: Peace Airshed Zone Association (PASZA) – August 2009 Ambient Air Report**

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Enclosed is the PASZA Ambient Monitoring Network Report for the month of **August 2009**.

**Continuous Monitoring: Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Kinuso (portable) and Valleyview.**

Included in this report is a summary of the monthly continuous monitoring, detailed hourly average reports and multipoint calibration reports of all instruments. Operational summaries can be found on the "Monthly Summary" and "Continuous Monitoring" pages of the report.

During the month of August the following events were noted:

**Henry Pirker Station:**

- ◆ The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (AAAQO) for the Henry Pirker station, with the exception of PM<sub>2.5</sub>:
  - 24-hour: August 29 32.6 µg/m<sup>3</sup> **AE Reference #218677**
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of August.

**Evergreen Park Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station, with the exception of PM<sub>2.5</sub>:
  - 24-hour: August 29 35.0 µg/m<sup>3</sup> **AE Reference #218676**
- ◆ All analyzers / sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of August.

**Smoky Heights Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of PM<sub>2.5</sub>:
  - AAAQO 24-hour: August 29 35.0 µg/m<sup>3</sup> **AE Reference #218678**
  - AAAQG 1-hour: August 29 83.3 µg/m<sup>3</sup> **AE Reference #218923**
  - AAAQG 1-hour: August 30 87.6 µg/m<sup>3</sup> **AE Reference #218924**
- ◆ All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of August.

**Beaverlodge Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station. with the exception of PM<sub>2.5</sub>:
  - AAAQO 24-hour: August 29 35.0 µg/m<sup>3</sup> **AE Reference #218675**
  - AAAQG 1-hour: August 09 92.1 µg/m<sup>3</sup> **AE Reference #218764**
- ◆ All analyzers / sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of August.

**Portable – Kinuso Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Kinuso station, with the exception of O<sub>3</sub>:
  - AAAQO 1-hour: August 29 98 ppb **AE Reference #218922**
  - AAAQO 1-hour: August 29 98 ppb **AE Reference #218922**
  - AAAQO 1-hour: August 29 105 ppb **AE Reference #218922**
- ◆ All analyzers / sensors at the Kinuso station had an operational uptime greater than 90% for the month of August.

**Valleyview Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station.
- ◆ All analyzers / sensors at the Valleyview station had an operational uptime of 100% for the month of August.

**Passive Monitoring - 43 Stations throughout the PASZA zone:**

There were four duplicate sites sampled in the month of August: Beaverlodge, Wanham, Fitzsimmons and Clouston Creek. The passive sample analyses were performed by MAXXAM Analytics Inc.

A summary of the passive data collected are reported as follows.

- Monthly average concentrations for SO<sub>2</sub> passives ranged from 0.1 ppb to 0.2 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.3 ppb to 2.2 ppb, with a mean of 0.9 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 9.5 ppb to 20.0 ppb, with a mean of 15.3 ppb.

If you have any questions, please contact the Focus Intec office at 1.403.263.8200 (Kelly Baragar or Sharon Whiteley).

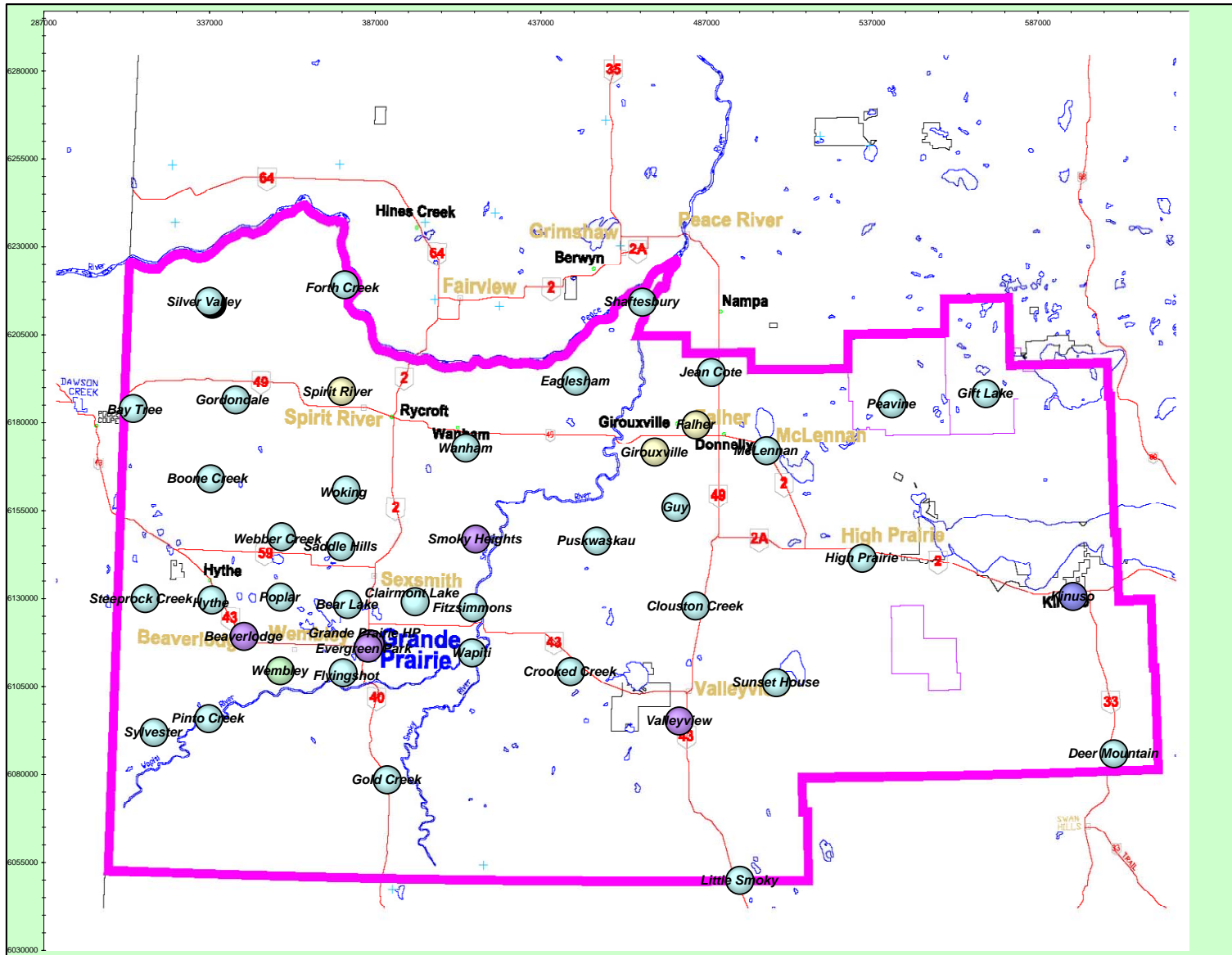
On Behalf of the,  
Peace Airshed Zone Association

Shelly Pruden  
Project Manager



Sharon Whiteley, B.Sc..  
FOCUS AQM Data Specialist

# Location of PASZA Continuous and Passive Monitoring Stations



## PASZA Monthly Continuous Data Summary

Aug-2009 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr		24-hr / 8-hr		
	1-hr	24-hr			1-hr	24-hr	Conc	Day	Conc	Day	
SO <sub>2</sub> (ppb)	172	57	Henry Pirker	0.2	0	0	9.5	Aug-29 11:00	1.2	Aug-29	100.0%
SO <sub>2</sub> (ppb)	172	57	Evergreen Park	0.6	0	0	13.3	Aug-18 08:00	1.9	Aug-24	100.0%
SO <sub>2</sub> (ppb)	172	57	Smoky Heights	0.3	0	0	4.5	Aug-01 09:00	0.9	Aug-29	100.0%
SO <sub>2</sub> (ppb)	172	57	Beaverlodge	0.4	0	0	17.0	Aug-27 11:00	2.0	Jul-12	96.4%
SO <sub>2</sub> (ppb)	172	57	Portable-Kinuso	0.2	0	0	5.4	Aug-28 13:00	1.0	Aug-28	99.3%
SO <sub>2</sub> (ppb)	172	57	Valleyview	0.2	0	0	3.2	Aug-17 22:00	0.6	Aug-17	100.0%
NO (ppb)			Henry Pirker	1.3	-	-	44.9	Aug-28 08:00	6.7	Aug-28	100.0%
NO <sub>2</sub> (ppb)	212	106	Henry Pirker	4.6	0	0	25.0	Aug-28 10:00	10.0	Aug-28	100.0%
NO <sub>x</sub> (ppb)			Henry Pirker	6.1	-	-	63.5	Aug-28 08:00	16.8	Aug-28	100.0%
NO (ppb)			Beaverlodge	0.3	-	-	11.9	Aug-05 08:00	1.2	Aug-05	96.2%
NO <sub>2</sub> (ppb)	212	106	Beaverlodge	2.4	0	0	49.9	Aug-28 22:00	9.7	Aug-29	96.2%
NO <sub>x</sub> (ppb)			Beaverlodge	2.7	-	-	54.3	Aug-28 22:00	10.8	Aug-29	96.2%
NO (ppb)			Portable-Kinuso	0.6	-	-	5.1	Aug-14 13:00	1.3	Aug-02	99.3%
NO <sub>2</sub> (ppb)	212	106	Portable-Kinuso	2.1	0	0	9.4	Aug-31 20:00	3.3	Aug-21	99.3%
NO <sub>x</sub> (ppb)			Portable-Kinuso	2.6	-	-	11.5	Aug-14 13:00	3.9	Aug-31	99.3%
O <sub>3</sub> (ppb)	82		Henry Pirker	23.1	0	-	53.3	Aug-28 15:00	35.3	Aug-21	100.0%
O <sub>3</sub> (ppb) - 8-hr		65	Henry Pirker			0			47.1	Aug-29	100.0%
O <sub>3</sub> (ppb)	82		Beaverlodge	25.2	0	-	50.8	Aug-29 17:00	34.0	Aug-21	96.4%
O <sub>3</sub> (ppb) - 8-hr		65	Beaverlodge			0			46.6	Aug-29	95.8%
O <sub>3</sub> (ppb)	82		Portable-Kinuso	22.6	3	-	104.7	Aug-29 18:00	47.8	Aug-29	99.3%
O <sub>3</sub> (ppb) - 8-hr		65	Portable-Kinuso			0			79.1	Aug-29	98.9%
CO (ppm)	13		Henry Pirker	0.24	0	-	0.7	Aug-29 22:00	0.4	Aug-29	100.0%
CO (ppm) - 8-hr		5	Henry Pirker			0			0.5	Aug-30	100.0%
THC (ppm)			Henry Pirker	2.13	-	-	2.9	Aug-27 08:00	2.4	Aug-29	100.0%
TRS (ppb)			Henry Pirker	0.2	-	-	1.0	Aug-31 07:00	0.5	Aug-31	100.0%
TRS (ppb)			Evergreen Park	0.8	0	0	9.8	Aug-17 16:00	2.4	Aug-24	100.0%
TRS (ppb)			Smoky Heights	0.4	-	-	1.3	Aug-02 01:00	0.5	Aug-02	100.0%
TRS (ppb)			Portable-Kinuso	0.4	-	-	0.6	Aug-19 09:00	0.5	Aug-19	99.3%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.1	0	0	0.4	Aug-05 04:00	0.1	Aug-01	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Henry Pirker	8.0	0	1	62.3	Aug-29 22:00	32.6	Aug-29	97.3%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Evergreen Park	9.0	0	1	46.7	Aug-29 13:00	35.0	Aug-29	98.4%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Smoky Heights	7.4	2	1	87.6	Aug-30 21:00	33.4	Aug-29	99.5%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Beaverlodge	10.4	1	1	92.1	Aug-09 19:00	35.0	Aug-29	100.0%

## PASZA Monthly Continuous Data Summary – continued

Aug-2009 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	59.7	-	-	92.1	Aug-14 08:00	79.0	Aug-03	100.0%
RH (%)			Evergreen Park	63.7	-	-	98.3	Aug-14 09:00	88.0	Aug-03	100.0%
RH (%)			Beaverlodge	58.5	-	-	95.9	Aug-14 07:00	84.4	Aug-03	100.0%
RH (%)			Valleyview	69.4	-	-	99.8	Aug-02 06:00	87.8	Aug-02	100.0%
SR (W/m <sup>2</sup> )			Henry Pirker	181.0	-	-	745.2	Aug-04 13:00	241.5	Aug-06	100.0%
Temp (°C)			Henry Pirker	16.6	-	-	29.8	Aug-01 17:00	23.1	Aug-01	100.0%
Temp (°C)			Evergreen Park	16.1	-	-	29.2	Aug-30 18:00	22.6	Aug-01	100.0%
Temp (°C)			Smoky Heights	15.6	-	-	30.1	Aug-01 16:00	22.4	Aug-01	100.0%
Temp (°C)			Beaverlodge	16.4	-	-	29.9	Aug-30 18:00	23.1	Aug-01	100.0%
Temp (°C)			Portable-Kinuso	15.5	-	-	29.5	Aug-29 14:00	19.8	Aug-29	99.3%
Temp (°C)			Valleyview	15.0	-	-	29	Aug-29 18:00	19.4	Aug-01	100.0%
WSPD s (km/hr)			Henry Pirker	9.7	-	-	33.0	Aug-17 13:00	19.0	Aug-18	100.0%
WSPD s (km/hr)			Evergreen Park	5.8	-	-	23.0	Aug-17 15:00	13.2	Aug-18	100.0%
WSPD s (km/hr)			Smoky Heights	11.5	-	-	43.0	Aug-11 16:00	24.4	Aug-22	100.0%
WSPD s (km/hr)			Beaverlodge	11.6	-	-	46.0	Aug-17 13:00	23.0	Aug-18	100.0%
WSPD s (km/hr)			Portable-Kinuso	5.7	-	-	23.0	Aug-21 03:00	9.7	Aug-21	99.3%
WSPD s (km/hr)			Valleyview	4.7	-	-	20.0	Aug-12 17:00	10.2	Aug-12	100.0%
WSPD v (km/hr)			Henry Pirker	3.7	-	-	33.0	Aug-17 12:00	17.6	Aug-18	100.0%
WSPD v (km/hr)			Evergreen Park	2.9	-	-	23.0	Aug-17 13:00	11.6	Aug-18	100.0%
WSPD v (km/hr)			Smoky Heights	5.9	-	-	42.0	Aug-11 16:00	23.6	Aug-22	100.0%
WSPD v (km/hr)			Beaverlodge	4.1	-	-	46.0	Aug-17 13:00	21.4	Aug-18	100.0%
WSPD v (km/hr)			Portable-Kinuso	2.7	-	-	23.0	Aug-21 03:00	8.7	Aug-20	99.3%
WSPD v (km/hr)			Valleyview	1.3	-	-	20.0	Aug-12 17:00	7.4	Aug-12	100.0%
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	100.0%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100.0%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100.0%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100.0%
WDIR			Portable-Kinuso	S	-	-	-	-	-	-	99.3%
WDIR			Valleyview	W	-	-	-	-	-	-	100.0%

# Continuous Network Equipment Summary

## PASZA – Henry Pirker Station

### General Station Issues

Routine monthly calibrations were performed on August 11<sup>h</sup> (SO<sub>2</sub>, NO<sub>x</sub> & O<sub>3</sub>) and August 12<sup>th</sup> (THC, CO & TRS).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	No operational issues observed.
O <sub>3</sub>	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Eleven (11) hours were flagged invalid on August 4 <sup>th</sup> and 5 <sup>th</sup> – suspect moisture on the filter. One (1) hour was flagged invalid due to a power bump. A total of eight (8) hours were flagged invalid due to baseline. One 24-hour exceednce on August 29 <sup>th</sup> - 32.6 µg/m <sup>3</sup> - <b>AE Reference #218677.</b>
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

## PASZA – Evergreen Park Station

### General Station Issues

Routine monthly calibrations were performed on August 18<sup>th</sup> (SO<sub>2</sub>, TRS).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed.
TRS	TEI	43C	Spans were outside the target range from August 2 <sup>nd</sup> – 5 <sup>th</sup> , 12 <sup>th</sup> – 16 <sup>th</sup> and 24 <sup>th</sup> – 31 <sup>st</sup> due to air conditioner failing – blower fan replaced early September.
PM <sub>2.5</sub>	R&P	1400AB	Twelve (12) hours were flagged invalid due to baseline drift. One 24-hour exceednce on August 29 <sup>th</sup> – 35.0 µg/m <sup>3</sup> - <b>AE Reference #218676.</b>
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS	Met One/ Gill	010C	No operational issues observed.
WD	Met One/ Gill	020C	No operational issues observed.

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**PASZA – Smoky Heights Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 26<sup>th</sup> (TRS, SO<sub>2</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Four (4) hours were flagged invalid due to baseline drift. One 24-hour exceedence of the AAAQO: August 29 -35.0 µg/m <sup>3</sup> - <b>AE Reference #218678</b> Two 1-hour exceedence of the AAAQG: August 29 - 83.3 µg/m <sup>3</sup> - <b>AE Reference #218923</b> August 30 - 87.6 µg/m <sup>3</sup> - <b>AE Reference #218924</b>
ET	Met One	083D	No operational issues observed.
WS	Met One	010C	No operational issues observed.
WD	Met One	020C	No operational issues observed.

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**PASZA – Beaverlodge Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 13<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub> & NO<sub>x</sub>). On August 27<sup>th</sup> a sample pump failure tripped the breaker resulting in a number of hours of invalid data for the SO<sub>2</sub>, O<sub>3</sub> & NO<sub>x</sub> analyzers. Second calibrations were done on August 30<sup>th</sup> to ensure operating efficiency of the analyzers (to address sample pump failure & tripped breaker).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43CTL	Twenty –seven hours were flagged invalid due to above noted tripped breaker.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	Twenty –seven hours were flagged invalid due to above noted tripped breaker, and one hour for maintenance.
O <sub>3</sub>	TEI	49C	Twenty –seven hours were flagged invalid due to above noted tripped breaker.
PM <sub>2.5</sub>	R&P	1400AB	One 24-hour exceedence of the AAAQO: August 29 -35.0 µg/m <sup>3</sup> - <b>AE Reference #218675</b> One 1-hour exceedence of the AAAQG: August 09 – 92.1 µg/m <sup>3</sup> - <b>AE Reference #218764</b>
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS	Blue Sky	857	No operational issues observed.
WD	Blue Sky	857	No operational issues observed.



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**PASZA – Kinuso (Portable) Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 28<sup>th</sup> (SO<sub>2</sub>, TRS, NO<sub>x</sub> & O<sub>3</sub>). A power failure on August 2<sup>nd</sup> resulted in five (5) hours of invalid data for all parameters.

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed except above noted power failure.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42i	No operational issues observed except above noted power failure.
TRS	TEI	43C	No operational issues observed except above noted power failure.
O <sub>3</sub>	TEI	49C	No operational issues observed except above noted power failure. Three 1-hour exceedence of the AAAQO: August 29 – 98 ppb - <b>AE Reference #218764</b> August 29 – 98 ppb - <b>AE Reference #218764</b> August 29 – 105 ppb - <b>AE Reference #218764</b>
ET	Met One		No operational issues observed except above noted power failure.
WS	Met One		No operational issues observed except above noted power failure.
WD	Met One		No operational issues observed except above noted power failure.

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**PASZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 24<sup>th</sup> (SO<sub>2</sub> & H<sub>2</sub>S). ).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed.
H <sub>2</sub> S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS	Gill	Met Pak 3	No operational issues observed.
WD	Gill	Met Pak 3	No operational issues observed.

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# PASZA

## Henry Pirker Station

### Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association  
Summary of Hourly Averages**

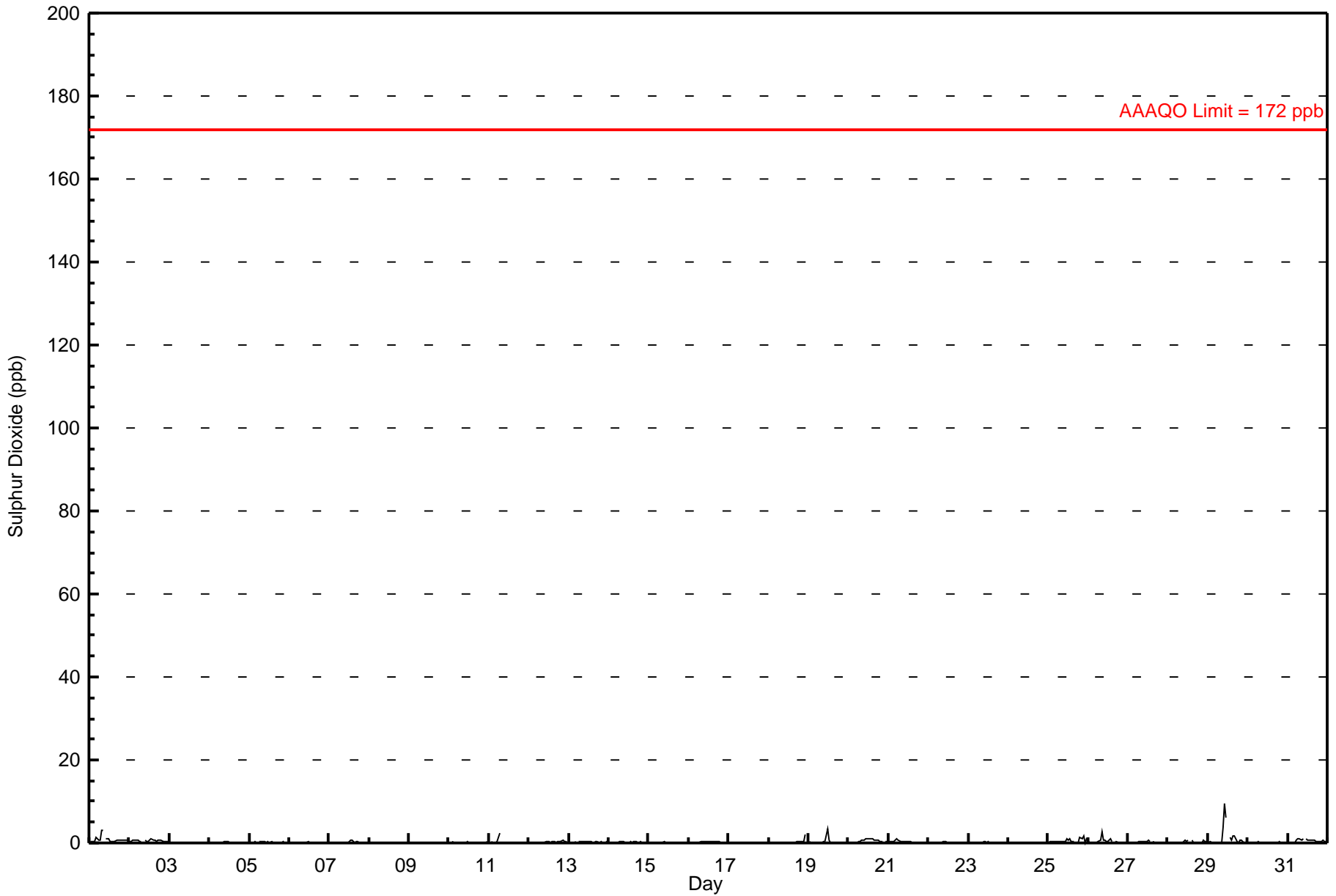
**Henry Pirker - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 9.5 ppb on Aug 29 11:00	Maximum Daily Average: 1.2 ppb on Aug 29
Hours of Data: 709	
Hours of Missing Data: 35	
Hours of Calibration: 35	
Percent Operational Time: 100.0	
Minimum Value: 0 ppb on Aug 3 01:00	Minimum Daily Average: 0.0 ppb on Aug 9
Maximum Diurnal Average: 0.6 ppb at hour 12	Minimum Diurnal Average: 0.1 ppb at hour 4
Monthly Average: 0.23 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 2.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	1	1	1	3	3	A	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0.8	3.2
2-Aug	0	0	1	1	1	1	0	0	A	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	0.5	0.9
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.1	0.7
8-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Aug	A	0	0	0	0	0	2	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.4
12-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
13-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
16-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
17-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.0
19-Aug	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.3
20-Aug	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0.5	1.2
21-Aug	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.9
22-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3
23-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
24-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
25-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	1	1	2	0	1	0.5	1.6
26-Aug	1	0	0	0	0	0	0	1	3	1	1	0	0	1	0	A	0	0	0	0	0	0	0	0	0.4	2.5
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0.2	0.8
28-Aug	0	0	0	0	0	0	0	0	0	0	1	0	1	A	1	0	0	0	0	0	0	1	0	0	0.2	0.6
29-Aug	0	0	0	0	0	0	0	0	0	4	10	6	A	1	1	2	2	0	0	1	1	0	0	0	1.2	9.5
30-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
31-Aug	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	1	0	0	0.5	1.1
	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.6	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	Diurnal Average
	0.8	0.5	0.6	0.7	1.4	0.9	2.4	3.2	3.0	3.9	9.5	6.2	1.0	1.5	0.9	1.6	1.6	0.8	0.8	1.4	0.9	1.6	2.0	0.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

# Hourly Averages for SO<sub>2</sub> at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

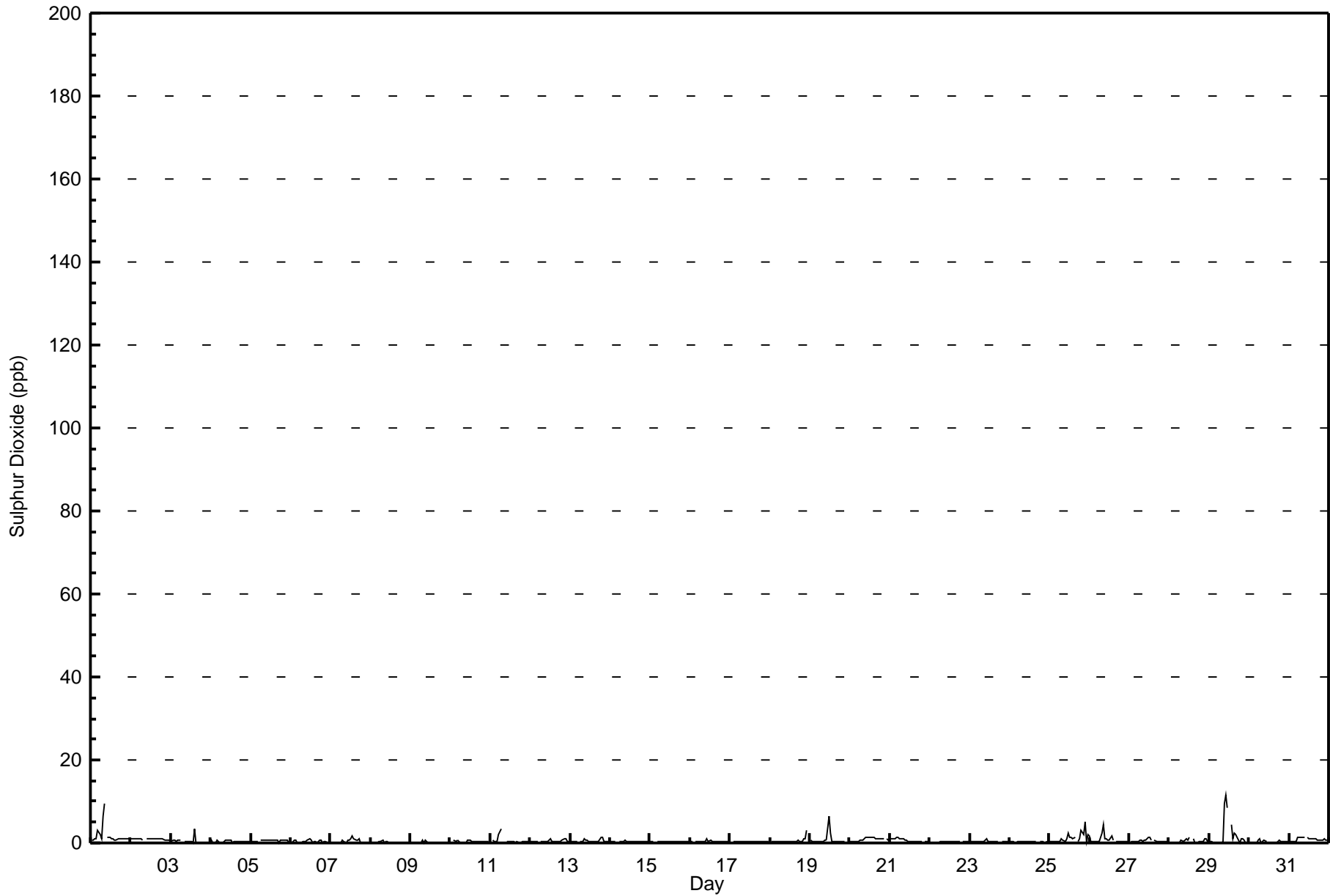
**Henry Pirker - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 11.5 ppb on Aug 29 11:00	Maximum Daily Average: 1.9 ppb on Aug 29	Hours in Service: 744
Minimum Value: 0 ppb on Aug 11 16:00	Minimum Daily Average: 0.1 ppb on Aug 9	Hours of Data: 709
Maximum Diurnal Average: 1.2 ppb at hour 12	Minimum Diurnal Average: 0.4 ppb at hour 4	Hours of Missing Data: 35
Monthly Average: 0.59 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.0 P <sub>99</sub> = 4.1	Hours of Calibration: 35
		Percent Operational Time: 100.0

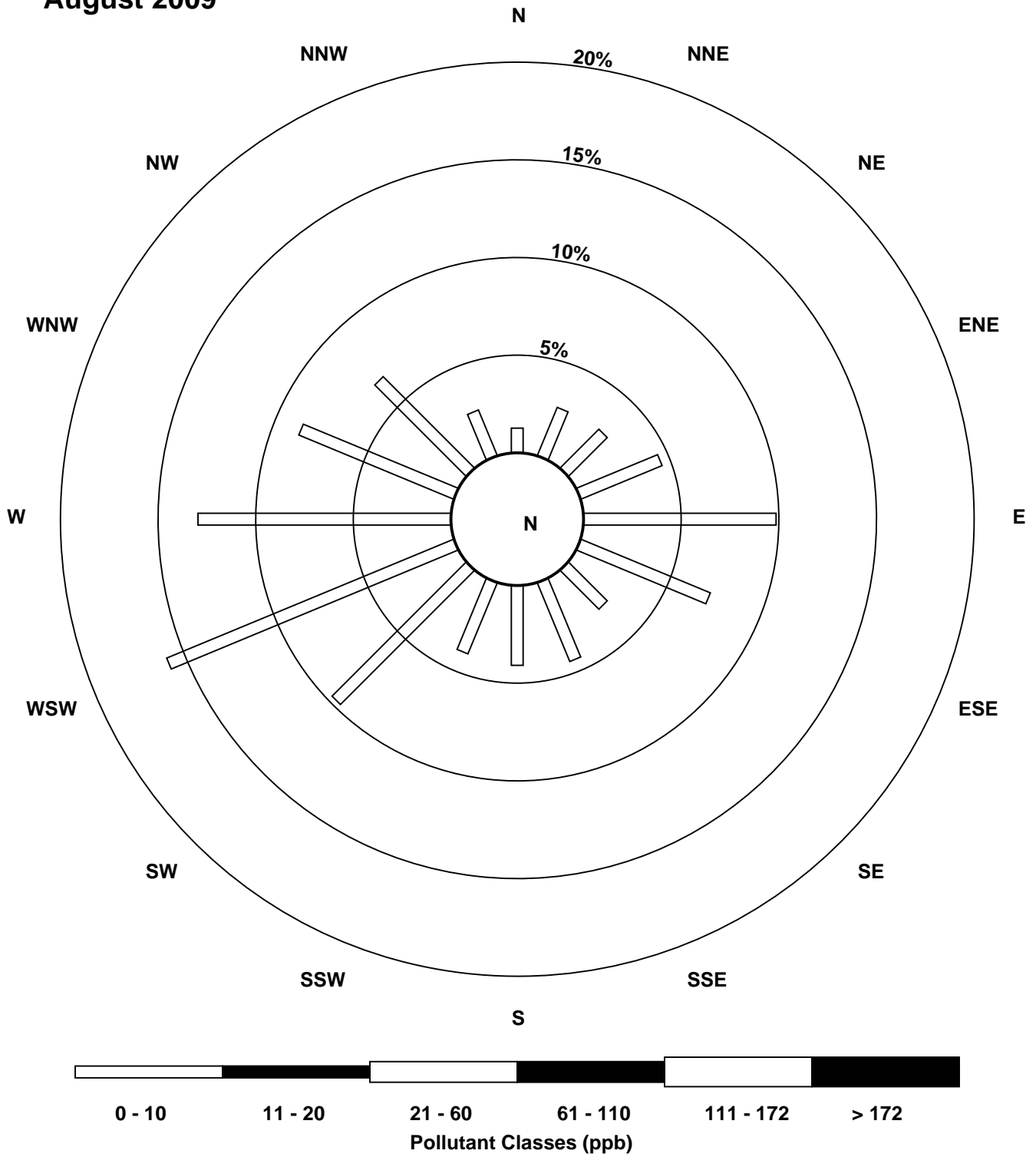
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	3	2	1	7	10	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.7	9.5
2-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
3-Aug	0	1	1	0	1	1	1	A	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0.4	3.5
4-Aug	1	0	0	0	1	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
5-Aug	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0.5	0.7
6-Aug	0	0	1	1	0	A	0	0	1	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0.3	1.1
7-Aug	0	0	0	0	A	0	0	1	0	0	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0.4	1.5
8-Aug	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
9-Aug	0	0	A	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
10-Aug	0	A	1	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
11-Aug	A	1	0	0	0	2	3	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.3
12-Aug	0	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0.5	1.0
13-Aug	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0.6	1.4
14-Aug	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
15-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
16-Aug	0	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
17-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
18-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3	A	0.6	3.0
19-Aug	1	0	0	0	0	0	0	0	0	1	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0.7	6.3
20-Aug	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.3
21-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.7	1.4
22-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0.4	0.5
23-Aug	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	A	0	0	0	1	0.5	1.0
24-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5
25-Aug	0	0	0	0	0	0	0	1	1	0	1	2	1	1	1	A	0	1	3	2	5	0	2	1.2	4.9	
26-Aug	2	0	0	0	0	0	0	2	4	1	1	1	1	2	1	A	0	1	0	0	0	0	0	0	0.9	4.4
27-Aug	0	0	0	0	0	0	1	1	0	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0.5	1.3
28-Aug	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	1	1	0	0.4	1.4
29-Aug	0	0	0	0	0	0	0	0	0	9	12	9	A	4	1	3	2	1	0	1	1	1	0	0	1.9	11.5
30-Aug	0	0	0	0	0	1	1	0	0	1	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0.3	1.0
31-Aug	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9	0.9	1.0	1.2	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.5	0.4	Diurnal Average	
	1.7	1.0	1.0	1.0	3.0	2.1	3.3	6.5	9.5	9.5	11.5	8.5	2.3	4.4	3.5	2.5	2.0	1.0	1.4	2.9	1.9	4.9	3.0	1.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for SO<sub>2</sub> at Henry Pirker August 2009



# Pollutant Rose for SO<sub>2</sub> at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Total Reduced Sulphur (TRS) - ppb  
August 1, 2009 to September 1, 2009**

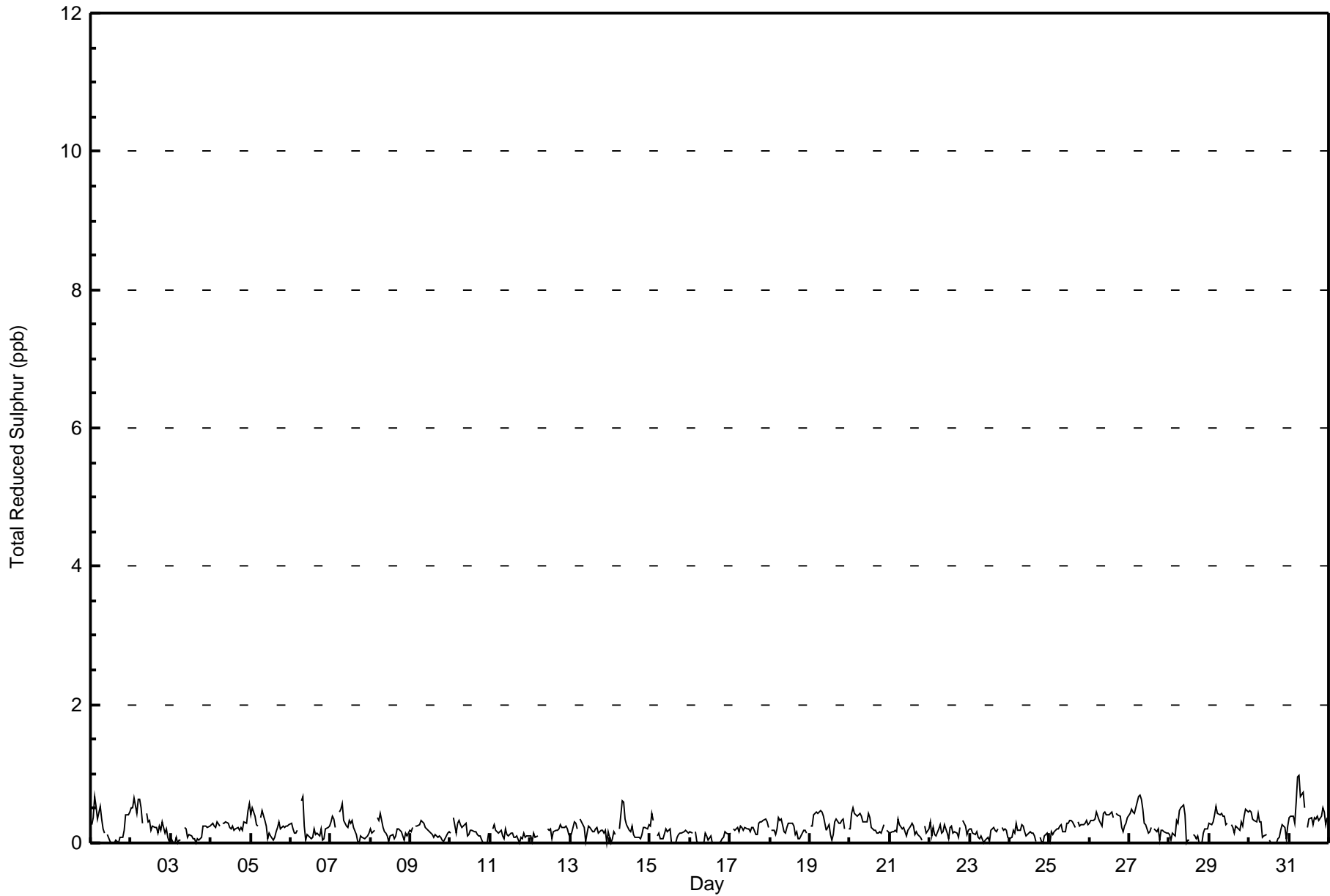
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 1.0 ppb on Aug 31 07:00	Maximum Daily Average: 0.5 ppb on Aug 31
Hours of Data: 709	Hours of Missing Data: 35
Hours of Calibration: 35	Hours of Calibration: 35
Percent Operational Time: 100.0	
Minimum Value: 0 ppb on Aug 1 13:00	Minimum Daily Average: 0.1 ppb on Aug 16
Maximum Diurnal Average: 0.3 ppb at hour 7	Minimum Diurnal Average: 0.1 ppb at hour 16
Monthly Average: 0.22 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.4 P <sub>99</sub> = 0.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	1	1	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
2-Aug	1	1	1	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.6	
5-Aug	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
6-Aug	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
7-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
8-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
9-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
10-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
11-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
12-Aug	0	0	0	0	0	A	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
13-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
14-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
15-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
16-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
17-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
18-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
19-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
20-Aug	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.5	
21-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3	
22-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3	
23-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2	
24-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3	
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3	
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5	
27-Aug	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.7	
28-Aug	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
29-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
30-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
31-Aug	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0.5	1.0	
	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average		
	0.5	0.5	0.7	0.5	0.6	0.9	1.0	0.7	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	Diurnal Maximum

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb

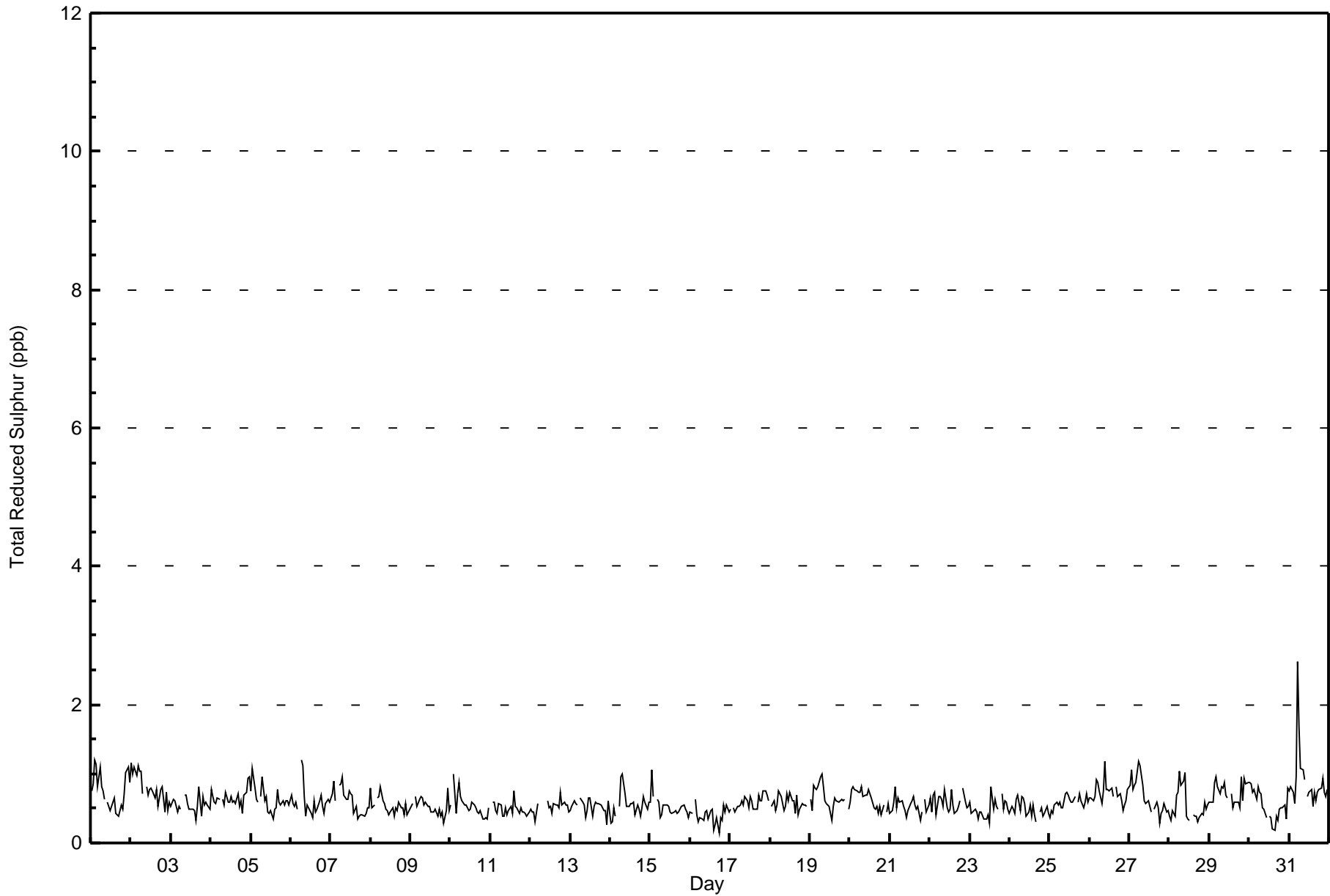


# Hourly Averages for TRS at Henry Pirker August 2009





# Hourly Maximums for TRS at Henry Pirker August 2009





**Peace Airshed Zone Association  
Summary of Hourly Averages**

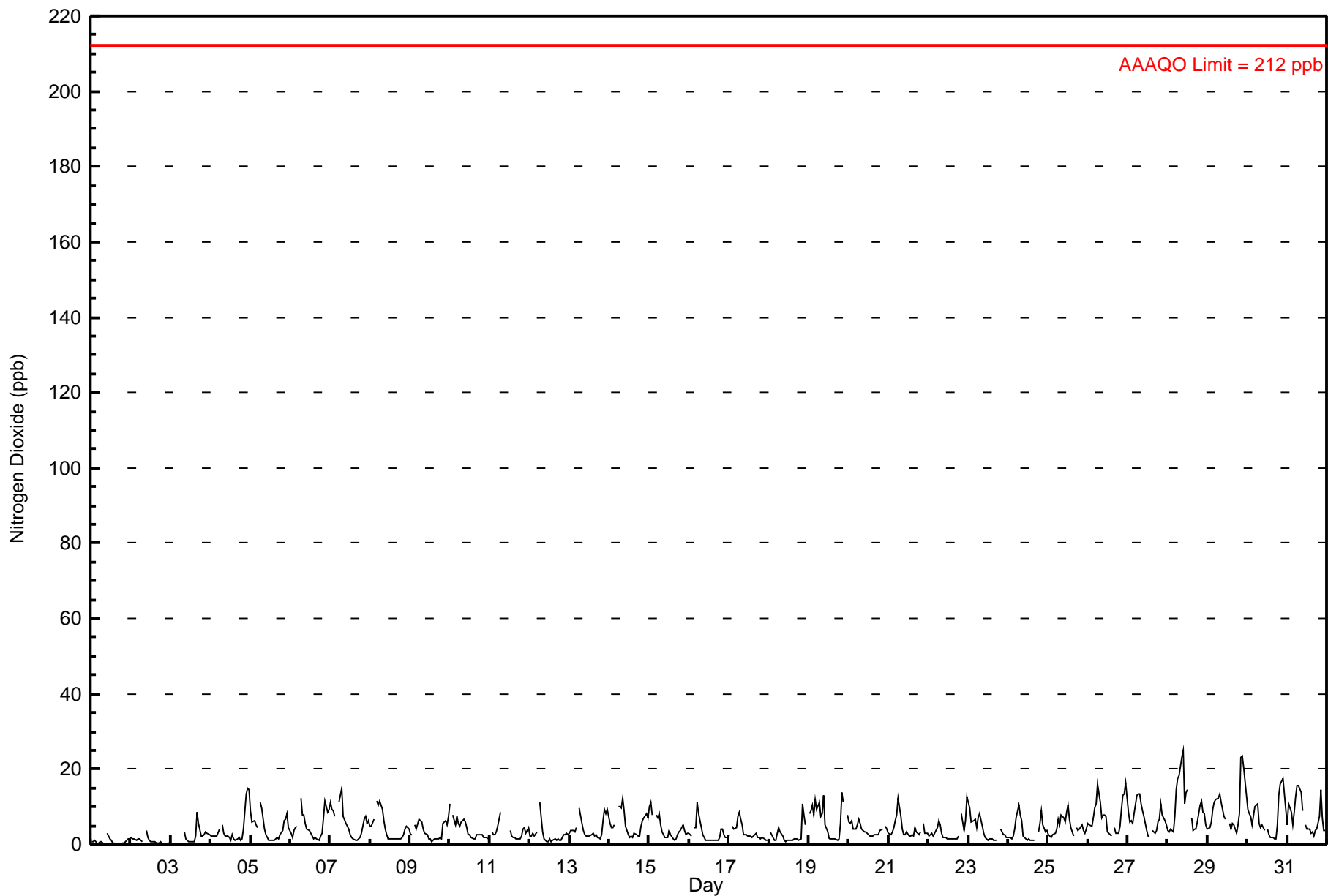
**Henry Pirker - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 25.0 ppb on Aug 28 10:00	Maximum Daily Average: 10.0 ppb on Aug 28
Minimum Value: 0 ppb on Aug 1 09:00	Hours of Data: 707
Maximum Diurnal Average: 9.2 ppb at hour 7	Hours of Missing Data: 37
Monthly Average: 4.63 ppb	Hours of Calibration: 37
Minimum Daily Average: 0.7 ppb on Aug 1	Percent Operational Time: 100.0
Minimum Diurnal Average: 1.9 ppb at hour 15	
Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 1.7 Median = 3.3 Q <sub>3</sub> = 6.4 P <sub>90</sub> = 10.3 P <sub>99</sub> = 17.1	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	0	1	1	0	0	A	3	1	1	1	0	0	0	0	0	0	0	1	2	2	0.7	2.8
2-Aug	2	2	2	1	2	1	1	1	A	4	2	1	1	1	1	1	1	0	1	0	0	0	0	0	1.0	3.8
3-Aug	0	0	0	0	0	0	0	A	3	2	1	1	1	1	1	2	9	5	2	2	3	3	3	3	1.8	8.5
4-Aug	2	2	2	2	2	4	A	5	3	2	2	2	1	2	1	1	2	2	1	2	4	13	15	14	3.9	14.8
5-Aug	9	6	6	5	4	A	11	10	4	2	2	1	1	1	1	1	2	2	2	4	6	7	8	4	4.4	11.0
6-Aug	3	2	4	5	5	A	12	8	8	6	4	4	3	2	2	2	1	1	2	3	7	11	9	9	4.9	12.4
7-Aug	11	10	9	7	A	11	13	15	7	6	5	4	3	2	2	1	1	1	2	3	7	7	6	6	6.1	15.0
8-Aug	5	5	7	A	12	10	11	9	6	4	3	2	2	1	1	1	1	1	1	2	3	4	5	4	4.4	11.6
9-Aug	3	2	A	5	4	7	6	6	4	3	3	2	1	1	2	2	2	2	2	2	5	6	5	8	3.5	7.5
10-Aug	11	A	8	5	7	5	5	6	7	6	4	3	3	2	2	2	2	2	3	3	2	2	2	1	4.0	10.9
11-Aug	A	4	3	3	3	5	8	C	C	C	C	C	4	2	2	2	2	1	2	4	5	3	4	3.2	8.5	
12-Aug	2	2	3	2	4	A	11	7	3	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	2.6	11.4
13-Aug	3	4	4	3	4	A	10	6	4	3	2	2	3	3	2	3	2	1	3	6	9	8	9	4.2	9.7	
14-Aug	6	4	5	5	A	10	10	10	12	9	5	2	2	2	3	3	2	2	5	6	7	8	7	5.5	12.2	
15-Aug	10	11	8	A	8	7	8	5	3	2	2	2	4	2	1	1	2	3	3	4	5	4	3	3	4.4	11.0
16-Aug	3	2	A	5	5	11	8	4	3	2	1	1	1	1	1	1	1	2	4	4	3	2	2	2.9	11.1	
17-Aug	3	A	5	4	5	8	8	7	5	3	3	2	2	2	3	3	2	2	2	2	2	1	1	1	3.2	8.5
18-Aug	A	3	2	1	1	3	4	4	2	1	1	1	1	1	1	2	1	1	2	11	8	5	A	2.6	10.8	
19-Aug	8	9	10	8	12	9	11	8	8	13	5	3	1	2	2	1	1	1	2	6	14	11	A	8	6.7	13.6
20-Aug	6	6	6	4	4	5	7	5	4	3	3	3	3	2	2	3	3	2	4	4	A	5	4	4.0	6.7	
21-Aug	3	3	3	5	6	8	12	7	4	3	3	3	2	2	2	5	3	3	3	A	5	3	3	4.1	12.4	
22-Aug	2	3	3	2	3	5	6	5	3	2	2	1	2	2	1	2	2	2	A	8	4	6	13	3.5	12.9	
23-Aug	11	10	6	6	7	4	7	8	5	3	2	1	1	2	1	1	1	1	A	4	3	3	2	4.0	11.2	
24-Aug	2	2	2	2	4	7	10	8	6	2	2	1	1	1	1	1	A	3	6	9	5	3	4	3.6	10.3	
25-Aug	3	2	2	3	3	4	7	5	8	7	6	9	11	7	4	2	A	4	4	4	5	4	3	4	4.8	10.6
26-Aug	5	5	5	7	10	11	16	11	7	8	8	7	3	3	2	A	5	3	3	5	9	13	13	16	7.6	16.4
27-Aug	9	6	6	5	8	13	14	13	11	9	7	4	2	2	A	4	3	4	6	7	11	8	7	5	7.1	13.5
28-Aug	4	4	4	4	7	15	18	18	23	25	11	14	15	A	7	4	4	4	6	10	11	9	8	5	10.0	25.0
29-Aug	4	4	6	9	11	12	12	13	11	9	7	7	A	6	4	6	5	3	5	8	23	24	20	13	9.8	23.5
30-Aug	9	8	7	5	10	10	11	5	4	5	4	A	4	2	2	2	1	2	5	13	16	18	14	9	7.3	17.6
31-Aug	5	11	8	5	9	13	16	16	14	9	A	5	4	4	3	3	2	4	4	8	15	7	4	4	7.5	15.7
	5.0	4.6	4.7	4.2	5.5	7.4	9.2	7.8	6.3	5.3	3.5	3.1	2.8	2.1	1.9	2.0	2.3	2.1	2.5	4.0	6.9	6.8	5.9	5.7	Diurnal Average	
	11.2	11.0	10.4	9.5	11.8	14.7	17.6	18.5	23.2	25.0	10.7	13.9	14.7	6.9	6.9	5.6	8.5	5.4	5.9	12.9	23.0	23.5	20.5	16.4	Diurnal Maximum	

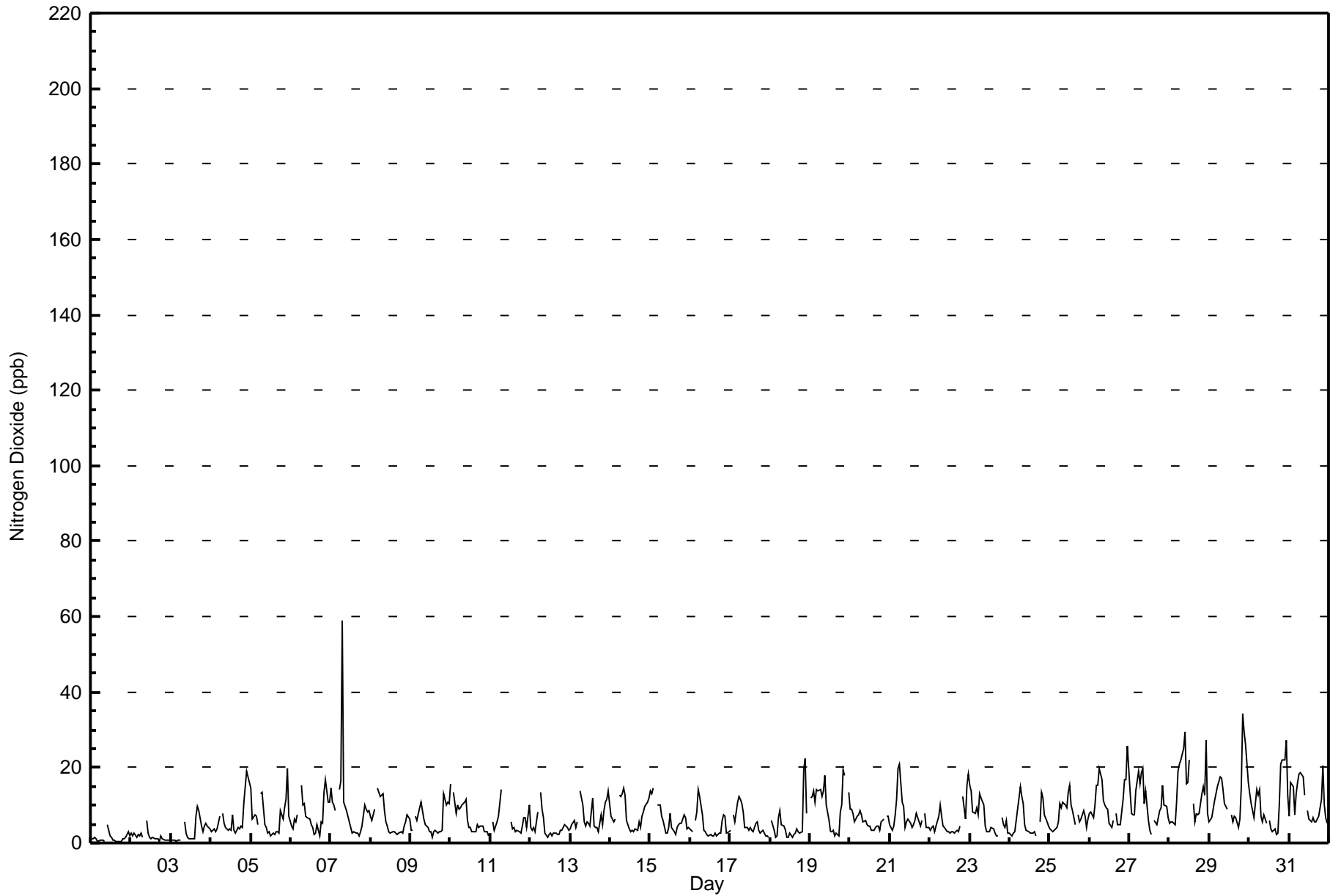
C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb    24-hr 106 ppb

# Hourly Averages for NO<sub>2</sub> at Henry Pirker August 2009





# Hourly Maximums for NO<sub>2</sub> at Henry Pirker August 2009







**Peace Airshed Zone Association  
Summary of Hourly Averages**

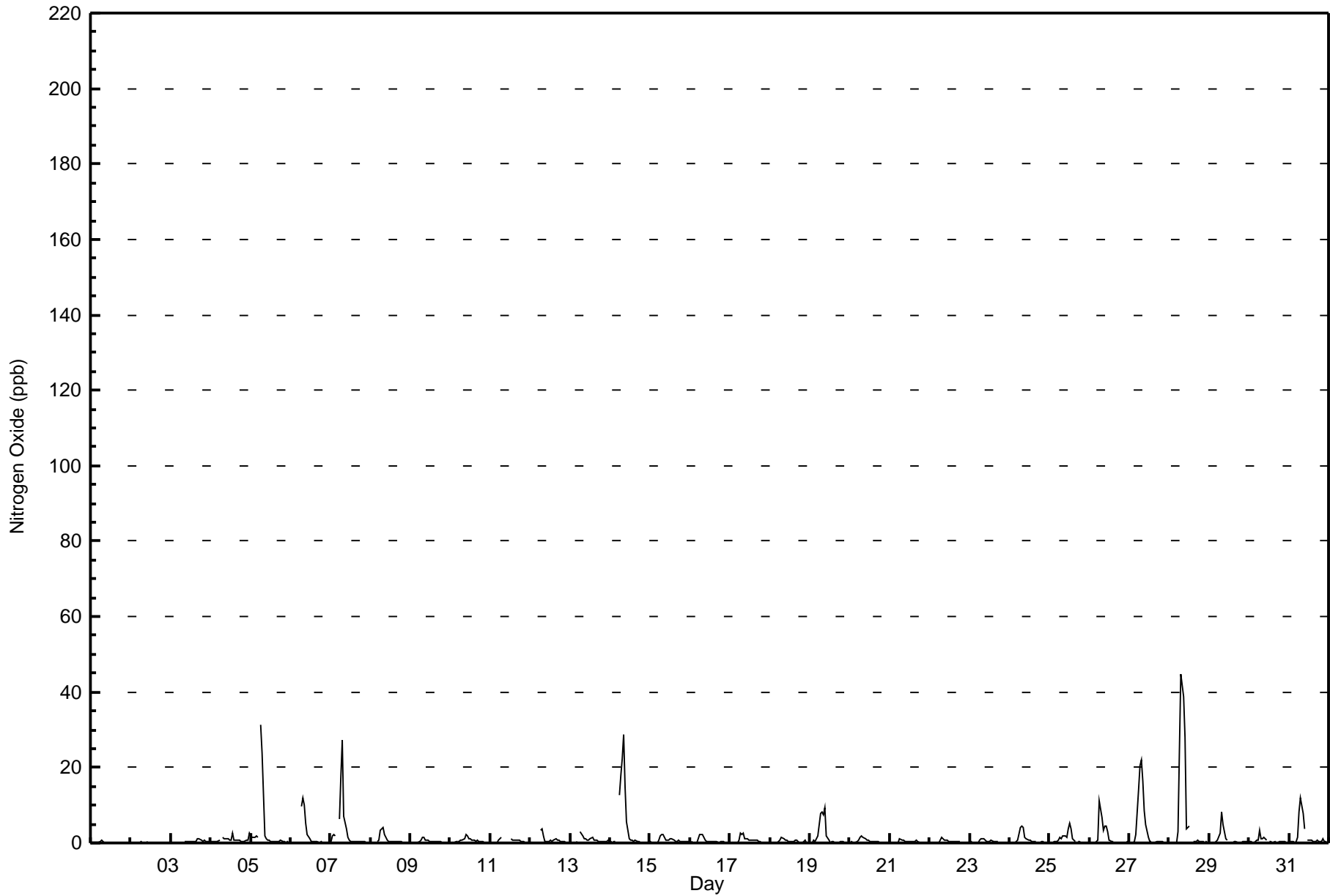
**Henry Pirker - Nitrogen Oxide (NO) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 44.9 ppb on Aug 28 08:00	Maximum Daily Average: 6.7 ppb on Aug 28	Hours in Service: 744
Minimum Value: 0 ppb on Aug 1 05:00	Minimum Daily Average: 0.1 ppb on Aug 2	Hours of Data: 707
Maximum Diurnal Average: 7.7 ppb at hour 8	Minimum Diurnal Average: 0.1 ppb at hour 23	Hours of Missing Data: 37
Monthly Average: 1.34 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.4 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 2.2 P <sub>99</sub> = 22.2	Hours of Calibration: 37
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0.3	1.1
4-Aug	0	0	1	0	0	1	A	2	1	1	1	1	1	3	1	1	1	1	0	0	0	1	1	2	0.9	2.7
5-Aug	2	2	2	2	2	A	31	24	2	1	1	1	0	0	0	0	0	0	1	0	0	0	0	3.2	31.2	
6-Aug	0	0	0	0	0	A	10	12	10	5	2	1	1	0	0	0	0	0	0	0	0	0	0	1.9	11.9	
7-Aug	0	2	2	2	A	6	18	27	7	4	1	1	0	0	0	0	0	0	0	0	0	0	0	3.2	27.3	
8-Aug	0	0	0	A	0	1	3	4	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.8	4.1	
9-Aug	0	0	A	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6	
10-Aug	0	A	0	0	0	1	1	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0.6	2.2	
11-Aug	A	0	0	0	0	1	2	C	C	C	C	C	1	1	1	1	1	1	0	0	0	0	0	0.5	1.7	
12-Aug	0	0	0	0	0	A	4	4	2	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0.7	3.8	
13-Aug	0	0	0	0	0	A	3	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.7	2.9	
14-Aug	0	0	0	0	A	13	18	22	29	15	5	1	1	1	1	1	0	0	0	0	0	0	0	4.7	28.9	
15-Aug	0	0	0	A	0	1	2	2	2	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0.7	2.3	
16-Aug	0	0	A	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.3	
17-Aug	0	A	0	0	0	1	3	2	3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	2.8	
18-Aug	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	1	1	0	0.5	1.5	
19-Aug	0	0	1	0	1	2	8	8	7	9	2	1	0	0	0	0	0	0	0	0	0	0	A	1.8	9.4	
20-Aug	0	0	0	0	0	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.5	1.7	
21-Aug	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	1	0	0	0	0	A	0	0	0.3	1.0	
22-Aug	0	0	0	0	0	0	1	2	1	1	1	0	1	1	0	0	0	0	0	A	0	0	0	0.4	1.6	
23-Aug	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	0	A	0	0	0	0	0.4	1.2	
24-Aug	0	0	0	0	0	1	4	4	4	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0.8	4.5	
25-Aug	0	0	0	0	0	1	1	1	2	2	2	4	5	4	1	1	A	0	0	0	0	0	0	1.1	5.1	
26-Aug	0	0	0	0	0	1	11	7	3	4	4	3	1	0	0	A	0	0	0	0	0	0	0	1.6	11.1	
27-Aug	0	0	0	0	2	14	21	22	16	9	5	2	1	0	0	A	0	0	0	0	0	0	0	4.1	22.1	
28-Aug	0	0	0	0	0	3	24	45	39	28	4	4	4	A	0	0	0	0	1	0	0	0	0	6.7	44.9	
29-Aug	0	0	0	0	0	1	3	8	5	3	1	1	A	0	0	0	0	0	0	0	1	0	1	1.0	8.1	
30-Aug	0	0	0	0	1	1	3	1	1	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5	
31-Aug	0	0	0	0	0	1	8	12	8	4	A	1	1	1	0	1	0	1	1	1	1	0	0	1.8	11.9	
	0.1	0.2	0.2	0.2	0.3	1.9	6.2	7.7	5.4	3.5	1.4	1.0	0.8	0.7	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.2	Diurnal Average	
	1.7	1.8	2.2	1.9	2.1	14.1	31.2	44.9	38.7	28.1	5.5	4.2	5.1	3.8	1.0	0.9	1.0	1.1	0.6	0.5	1.0	0.9	0.8	2.4	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Averages for NO at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

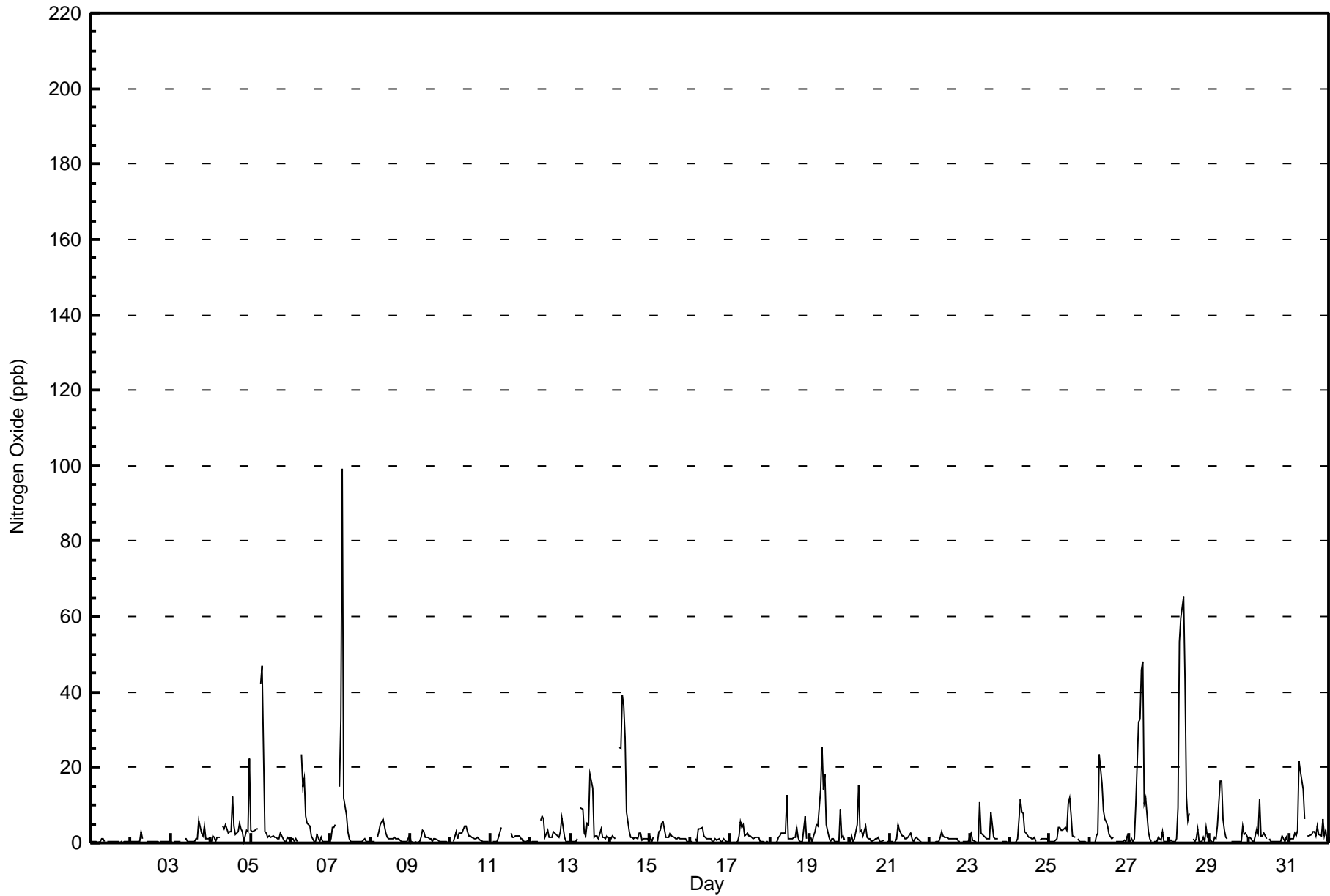
**Henry Pirker - Nitrogen Oxide (NO) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 99.1 ppb on Aug 7 08:00	Maximum Daily Average: 11.9 ppb on Aug 28	Hours in Service: 744
Minimum Value: 0 ppb on Aug 9 23:00	Minimum Daily Average: 0.5 ppb on Aug 1	Hours of Data: 707
Maximum Diurnal Average: 15.8 ppb at hour 8	Minimum Diurnal Average: 0.7 ppb at hour 1	Hours of Missing Data: 37
Monthly Average: 3.23 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.5 Median = 1.0 Q <sub>3</sub> = 2.5 P <sub>90</sub> = 6.0 P <sub>99</sub> = 45.1	Hours of Calibration: 37
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	0	1	1	1	1	A	0	0	1	1	1	0	0	0	1	0	0	0	1	0		
2-Aug	0	1	1	1	1	1	3	1	A	1	1	0	0	1	0	1	0	0	1	1	1	1	1	0		
3-Aug	0	0	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	6	3	2	4	1	1			
4-Aug	1	2	1	0	1	1	A	4	4	5	2	3	3	12	5	2	3	5	4	3	1	3	3			
5-Aug	3	3	4	4	4	A	42	47	3	3	1	2	2	2	1	1	1	1	3	1	1	1	2			
6-Aug	1	1	0	1	0	A	24	15	17	7	5	5	2	1	1	1	2	0	1	0	1	0	0			
7-Aug	1	4	4	5	A	15	33	99	12	8	3	1	1	1	1	1	1	1	1	1	1	0	1			
8-Aug	0	0	0	A	1	3	5	6	4	3	1	1	1	1	1	1	1	1	1	1	1	0	2			
9-Aug	0	0	A	0	0	1	1	3	3	2	2	1	1	1	1	1	1	1	1	0	0	0	0			
10-Aug	0	A	0	3	1	2	2	2	4	4	3	2	2	2	1	1	1	1	1	1	1	1	0			
11-Aug	A	0	1	1	1	1	4	C	C	C	C	C	3	2	2	2	2	2	1	1	1	0	1			
12-Aug	0	0	0	1	1	A	6	7	6	1	3	1	1	1	3	2	2	1	3	7	1	1	0			
13-Aug	1	1	1	1	1	A	9	9	2	2	5	5	18	15	2	2	2	1	4	1	1	1	2			
14-Aug	1	2	1	1	A	25	25	39	37	28	8	3	1	1	1	1	2	2	1	1	1	1	1			
15-Aug	1	1	2	A	0	3	4	5	5	2	1	2	3	2	2	1	1	2	1	1	1	1	1			
16-Aug	1	1	A	1	1	4	4	4	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0			
17-Aug	0	A	1	0	1	2	5	4	5	2	3	2	2	2	1	1	2	2	1	1	0	0	0			
18-Aug	A	0	0	0	1	1	2	3	2	2	13	1	1	1	2	2	4	1	1	0	4	7	A			
19-Aug	1	1	2	3	5	4	14	25	14	18	5	2	1	1	1	1	1	1	9	1	2	1	A			
20-Aug	0	2	1	1	5	15	3	4	2	4	2	1	1	1	1	1	1	2	1	1	A	0	0			
21-Aug	1	1	0	0	1	5	3	2	2	1	1	1	3	1	1	1	1	1	1	0	A	0	0			
22-Aug	0	0	0	0	0	1	2	3	2	2	1	1	1	1	1	1	1	1	1	A	0	0	1			
23-Aug	2	2	1	0	0	0	11	3	2	2	1	1	1	8	2	1	1	1	A	1	1	0	1			
24-Aug	0	0	0	0	1	1	12	8	8	3	2	2	2	1	1	2	1	A	1	1	1	1	1			
25-Aug	1	1	1	1	1	4	4	4	4	4	3	10	12	8	2	2	A	1	1	1	0	1	0			
26-Aug	0	0	0	0	2	3	24	16	8	7	6	5	2	1	1	A	1	1	1	1	0	1	0			
27-Aug	0	1	1	1	10	32	33	46	48	10	12	3	1	1	A	1	1	1	1	1	3	1	1			
28-Aug	0	1	1	0	1	9	53	60	65	43	12	6	8	A	1	1	1	4	1	1	1	4	2			
29-Aug	1	0	0	1	1	4	17	17	7	4	2	1	A	1	0	1	1	1	0	0	4	2	3			
30-Aug	1	1	1	0	4	3	12	2	2	3	1	A	1	1	1	1	1	0	1	1	2	1	1			
31-Aug	1	1	1	2	2	3	22	19	14	7	A	2	2	2	3	3	2	4	2	2	6	2	3			
	0.7	0.9	0.8	1.0	1.6	5.4	12.6	15.8	9.9	6.1	3.5	2.3	2.6	2.3	1.3	1.1	1.2	1.5	1.5	1.0	1.4	1.0	1.4	Diurnal Average		
	3.4	4.0	4.0	5.0	10.0	32.1	53.3	99.1	65.2	43.1	12.7	10.4	18.2	14.6	4.6	2.9	3.9	5.9	8.9	6.8	6.4	7.0	4.0	22.2	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

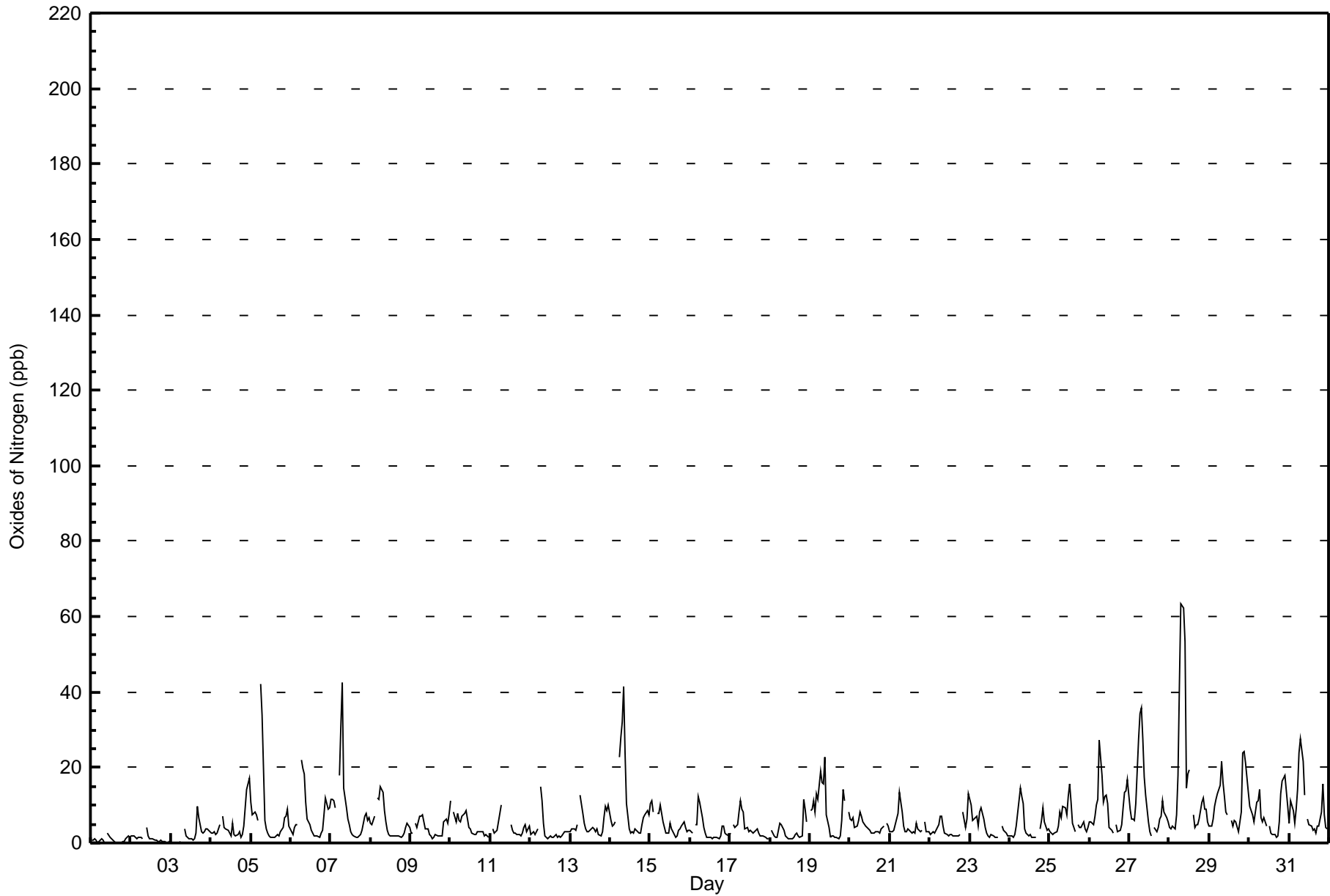
**Henry Pirker - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 63.5 ppb on Aug 28 08:00	Maximum Daily Average: 16.8 ppb on Aug 28	Hours in Service: 744
Minimum Value: 0 ppb on Aug 1 09:00	Minimum Daily Average: 0.7 ppb on Aug 1	Hours of Data: 707
Maximum Diurnal Average: 15.6 ppb at hour 8	Minimum Diurnal Average: 2.4 ppb at hour 15	Hours of Missing Data: 37
Monthly Average: 6.05 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.2 Median = 3.9 Q <sub>3</sub> = 7.4 P <sub>90</sub> = 12.4 P <sub>99</sub> = 40.8	Hours of Calibration: 37
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	0	1	1	1	0	A	3	1	1	1	0	0	0	0	0	0	0	1	2	2	0.7	2.8
2-Aug	2	2	2	1	2	2	1	1	A	4	2	1	1	1	1	1	1	0	1	1	0	0	0	0	1.1	4.1
3-Aug	0	0	0	0	0	0	0	A	4	2	1	1	1	1	1	3	10	7	3	3	3	4	4	3	2.1	9.5
4-Aug	3	3	3	2	3	5	A	7	4	4	3	3	2	5	2	2	2	3	2	2	4	14	16	17	4.8	17.0
5-Aug	11	8	8	7	6	A	42	34	6	4	3	2	1	1	1	2	2	2	3	4	7	7	9	5	7.6	42.3
6-Aug	3	2	4	5	5	A	22	20	18	11	6	5	3	2	2	2	2	1	3	3	7	12	9	9	6.9	22.2
7-Aug	11	11	11	9	A	18	31	43	15	9	6	5	3	2	2	2	2	2	2	3	7	8	6	7	9.3	42.5
8-Aug	5	5	7	A	12	11	15	13	9	5	3	2	2	2	2	2	2	2	2	2	3	4	5	4	5.2	15.1
9-Aug	3	3	A	5	4	7	7	8	6	4	4	2	2	1	2	2	2	2	2	2	6	6	5	8	3.9	7.7
10-Aug	11	A	8	6	8	6	6	7	8	8	6	4	4	3	2	2	3	3	3	3	2	2	2	1	4.7	11.2
11-Aug	A	4	3	3	3	5	10	C	C	C	C	C	5	3	3	2	2	2	2	3	4	5	3	5	3.8	10.2
12-Aug	2	2	3	2	4	A	15	11	5	2	1	1	2	1	2	2	1	2	2	2	3	3	3	3	3.3	15.0
13-Aug	3	4	4	3	5	A	13	8	5	4	3	3	3	4	4	3	4	2	2	3	7	10	9	10	5.0	12.8
14-Aug	6	5	5	5	A	23	28	32	41	24	10	4	3	3	4	3	3	2	5	7	7	9	7	7	10.3	41.2
15-Aug	10	11	8	A	8	8	10	8	6	2	3	3	5	4	2	2	2	3	4	4	6	4	3	3	5.2	11.3
16-Aug	3	3	A	5	5	12	11	7	4	3	2	2	1	1	1	1	1	2	4	5	3	2	2	2	3.5	12.4
17-Aug	3	A	5	4	5	8	11	9	8	4	4	3	3	3	3	3	4	2	2	2	2	1	1	1	4.0	11.2
18-Aug	A	3	2	1	1	3	5	5	3	2	1	1	1	1	1	2	2	2	1	2	11	9	5	A	3.1	11.4
19-Aug	9	9	11	8	13	11	19	16	16	23	7	4	2	2	2	2	1	2	6	14	11	A	8	8	8.6	22.6
20-Aug	6	6	7	4	4	6	8	7	5	4	4	4	3	3	3	3	3	3	4	4	4	A	5	4	4.6	8.2
21-Aug	3	3	3	5	6	8	13	8	5	3	3	4	3	3	3	2	5	4	3	3	A	6	3	3	4.5	13.5
22-Aug	2	3	3	2	3	5	7	7	4	3	2	2	2	2	2	2	2	2	3	A	8	4	6	13	3.9	13.2
23-Aug	12	10	6	7	7	4	8	9	6	4	2	2	2	2	2	2	2	1	A	4	3	3	3	2	4.5	11.6
24-Aug	2	2	2	2	4	8	15	12	11	4	3	2	2	2	1	1	1	A	4	6	9	6	4	4	4.6	14.6
25-Aug	3	2	2	3	3	5	8	7	10	9	7	12	16	11	5	3	A	5	4	4	5	4	3	4	5.9	15.8
26-Aug	6	5	5	7	10	11	27	18	11	12	13	11	4	3	3	A	5	3	3	5	9	13	14	17	9.4	27.2
27-Aug	9	6	6	6	10	28	34	36	27	18	13	5	3	2	A	4	3	4	6	7	11	8	7	5	11.3	35.7
28-Aug	4	4	4	4	7	18	42	64	62	53	15	18	19	A	7	4	5	5	6	11	12	9	9	5	16.8	63.5
29-Aug	4	5	6	10	11	13	15	22	16	12	8	7	A	6	4	6	6	3	5	8	24	24	21	13	10.9	24.1
30-Aug	10	9	8	5	11	11	14	7	6	7	4	A	4	3	2	2	2	2	6	13	16	18	14	10	7.9	17.9
31-Aug	5	11	9	5	9	14	24	28	22	13	A	6	5	5	3	4	3	5	5	8	16	7	4	4	9.3	27.6
	5.2	4.9	5.0	4.5	5.9	9.3	15.5	15.6	11.8	8.8	5.0	4.1	3.6	2.8	2.4	2.4	2.7	2.6	2.9	4.3	7.2	7.1	6.2	6.0	Diurnal Average	
	11.6	11.4	11.3	9.7	13.0	27.5	42.3	63.5	62.1	53.4	14.7	18.3	19.2	10.8	7.4	5.9	9.5	6.6	6.5	13.2	23.8	24.1	21.2	17.0	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

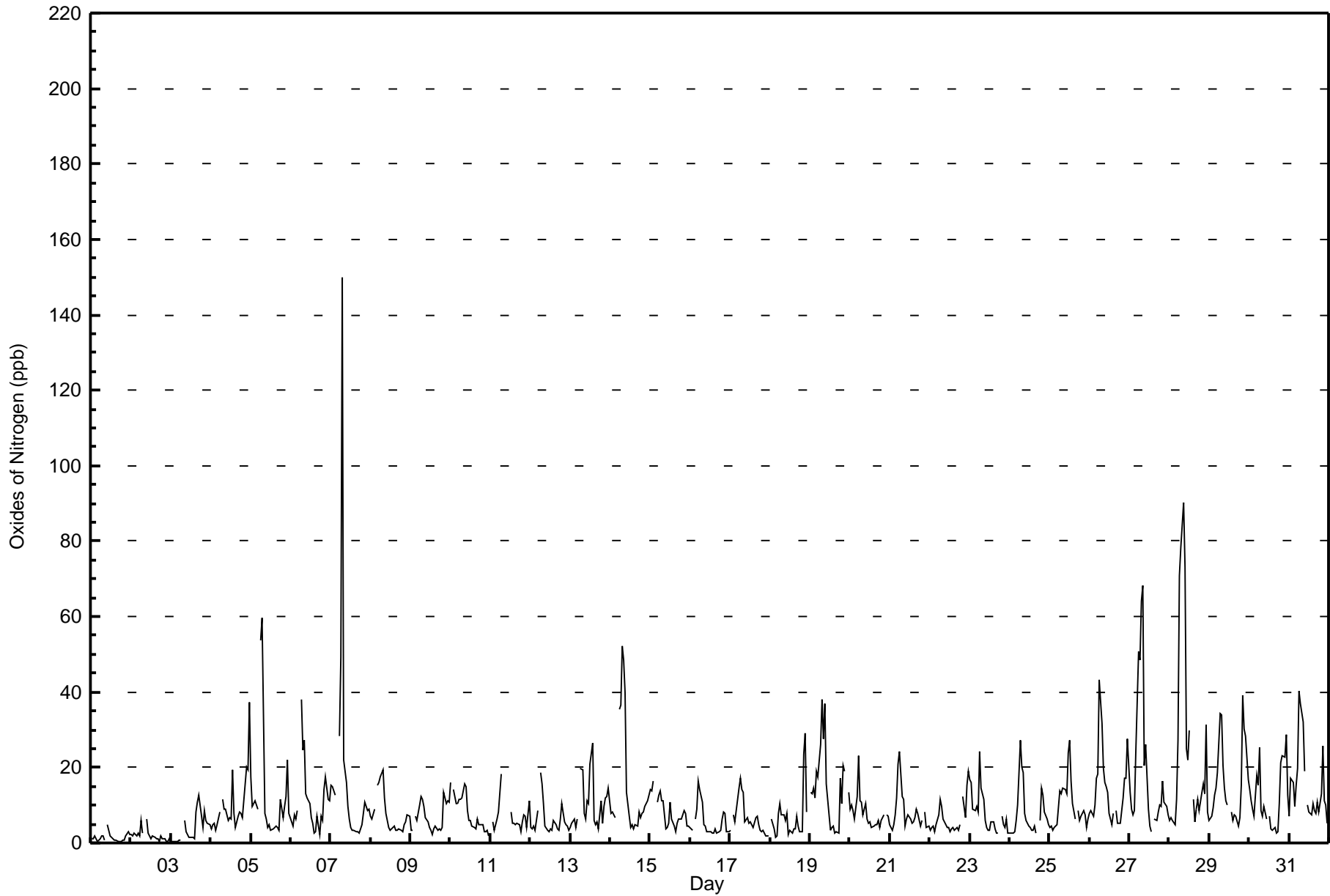
# Hourly Averages for NO<sub>x</sub> at Henry Pirker August 2009







# Hourly Maximums for NO<sub>x</sub> at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

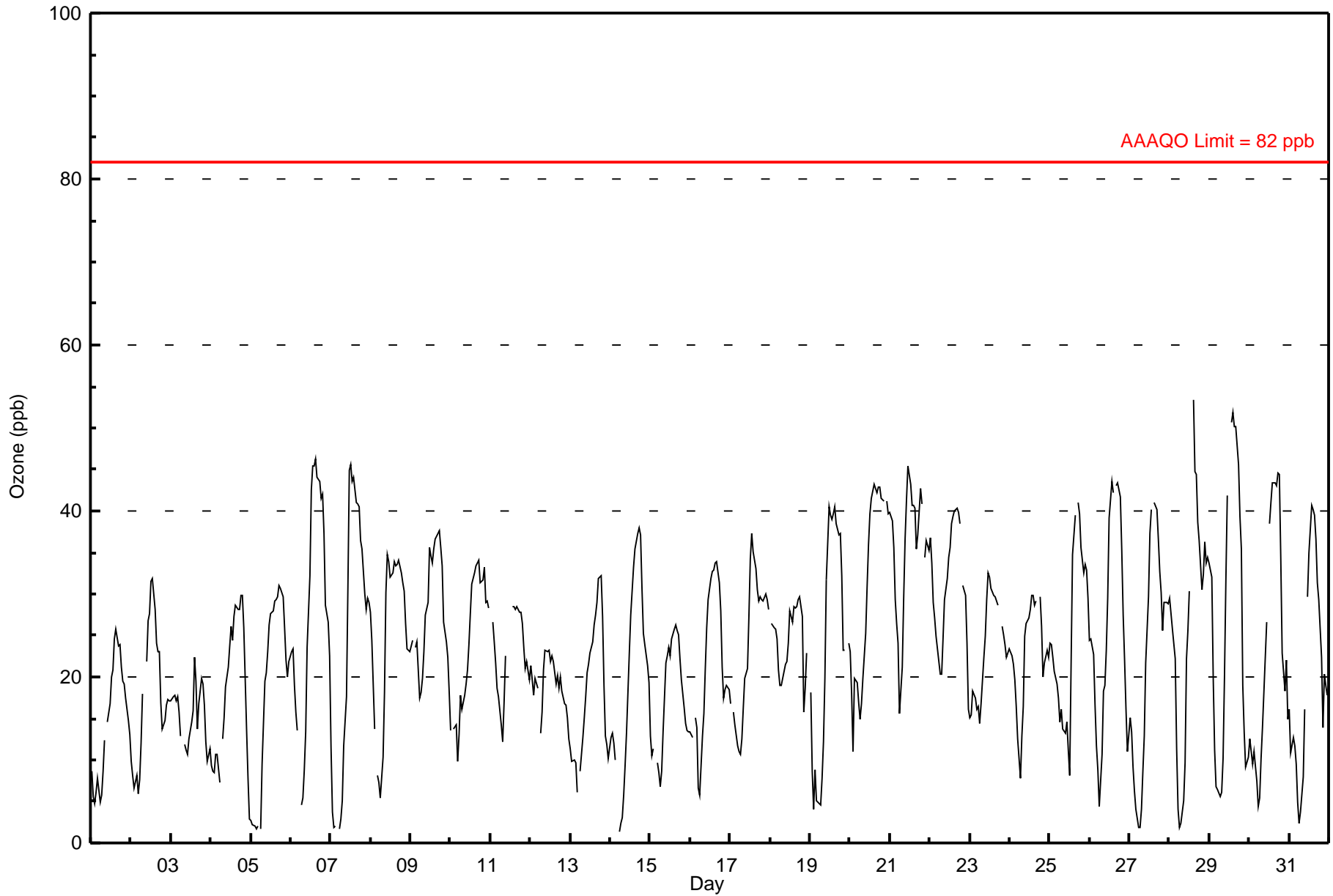
**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 53.3 ppb on Aug 28 15:00	Maximum Daily Average: 35.3 ppb on Aug 21
Minimum Value: 1 ppb on Aug 14 06:00	Hours of Data: 709
Maximum Diurnal Average: 34.8 ppb at hour 15	Hours of Missing Data: 35
Monthly Average: 23.14 ppb	Hours of Calibration: 35
Minimum Daily Average: 14.8 ppb on Aug 1	Percent Operational Time: 100.0
Minimum Diurnal Average: 9.2 ppb at hour 7	
Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 8.6 Q <sub>1</sub> = 14.5 Median = 22.8 Q <sub>3</sub> = 30.7 P <sub>90</sub> = 39.4 P <sub>99</sub> = 45.2	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	9	6	5	6	8	5	6	9	12	A	15	17	20	21	25	26	24	24	21	20	19	17	15	13	14.8	25.7																							
2-Aug	10	8	7	8	6	8	12	18	A	22	27	28	32	32	28	24	23	23	17	14	15	17	17	17	17.9	31.8																							
3-Aug	17	18	18	17	18	16	13	A	12	11	11	12	15	16	22	19	14	17	20	19	17	12	10	11	15.4	22.4																							
4-Aug	9	9	8	11	11	7	A	13	15	19	21	24	26	24	27	29	28	28	30	30	26	13	8	3	18.2	29.9																							
5-Aug	3	2	2	2	2	A	2	10	19	20	23	26	28	28	29	29	30	31	31	30	26	22	20	22	18.9	31.0																							
6-Aug	23	23	19	16	14	A	5	5	9	13	24	32	43	45	45	46	44	44	42	42	37	29	27	23	28.2	46.3																							
7-Aug	12	4	2	2	A	2	3	5	12	18	31	45	46	44	44	41	41	41	37	35	30	28	29	29	25.1	45.6																							
8-Aug	28	24	14	A	8	7	5	10	18	30	35	34	32	33	34	33	33	34	33	31	30	27	23	23	25.2	34.8																							
9-Aug	24	24	A	24	24	17	18	20	23	27	29	36	35	34	35	37	37	38	36	33	27	24	22	18	27.9	37.6																							
10-Aug	14	A	14	14	10	13	18	16	18	19	21	24	28	31	33	33	34	34	31	32	33	29	29	28	24.1	34.1																							
11-Aug	A	27	24	22	19	18	14	12	17	23	C	C	C	28	28	28	28	28	28	26	24	21	22	20	22.8	28.5																							
12-Aug	21	20	18	20	19	A	13	16	21	23	23	22	23	22	19	20	19	20	18	17	17	15	13	10	19.1	23.2																							
13-Aug	11	10	10	10	6	A	9	13	15	18	20	22	23	24	26	28	29	32	32	27	19	13	12	10	18.2	32.2																							
14-Aug	13	13	12	10	A	1	2	3	6	9	13	23	27	30	33	35	37	38	37	31	25	24	21	19	20.2	38.0																							
15-Aug	13	11	11	A	10	8	7	9	13	22	23	24	23	25	26	26	26	25	22	20	16	14	14	13	17.3	26.3																							
16-Aug	13	13	A	15	14	7	6	13	16	21	26	29	32	33	33	34	34	31	28	21	17	18	19	18	21.3	33.9																							
17-Aug	17	A	16	14	12	11	11	12	16	20	21	27	34	37	35	33	31	29	30	29	29	30	29	28	24.0	37.4																							
18-Aug	A	27	26	26	24	21	19	19	21	21	22	24	28	27	28	28	28	29	30	27	16	19	23	A	24.2	29.7																							
19-Aug	18	9	4	9	5	5	5	8	12	20	32	41	39	39	40	41	38	37	37	32	23	23	A	24	23.5	40.6																							
20-Aug	23	18	11	20	19	17	15	17	20	25	31	36	40	42	43	43	42	43	43	41	41	A	41	40	30.9	43.3																							
21-Aug	40	39	36	29	26	24	16	21	29	37	41	45	43	41	41	40	35	37	43	41	A	34	36	35	35.3	45.5																							
22-Aug	37	34	29	27	25	22	20	20	25	29	32	34	36	38	39	40	40	40	38	A	31	30	24	16	30.8	40.4																							
23-Aug	15	16	18	17	16	16	14	17	22	25	29	33	32	31	30	30	29	29	A	26	25	24	22	23	23.5	32.6																							
24-Aug	23	23	21	20	17	13	8	13	17	25	26	27	28	30	30	29	29	A	30	26	20	22	23	22	22.6	29.9																							
25-Aug	24	24	22	21	19	17	15	16	14	13	15	11	8	22	35	39	A	41	40	36	33	34	33	30	24.3	40.9																							
26-Aug	24	25	23	17	12	9	4	11	18	19	23	30	39	44	42	A	43	43	42	35	28	22	16	11	25.2	43.6																							
27-Aug	15	13	9	6	4	2	2	4	9	13	22	30	37	40	A	41	40	37	33	30	26	29	29	29	21.7	41.0																							
28-Aug	29	28	26	22	11	4	2	2	5	10	22	26	30	A	53	45	44	39	37	30	32	36	34	34	26.2	53.3																							
29-Aug	34	32	20	11	7	6	6	6	10	20	32	42	A	51	52	50	50	46	39	36	19	13	9	10	26.1	51.9																							
30-Aug	13	11	10	11	7	4	5	10	14	18	27	A	38	41	43	43	43	43	45	44	34	23	18	22	15	23.5	44.6																						
31-Aug	16	11	13	12	9	5	2	4	8	16	A	30	35	41	40	39	37	31	29	22	14	20	19	18	20.5	40.6																							
																								18.9	17.9	15.4	15.1	13.1	10.6	9.2	11.7	15.5	20.2	24.7	28.7	30.9	33.1	34.8	34.3	33.8	33.7	32.6	29.2	24.6	22.7	22.2	20.6	Diurnal Average	
																								39.9	38.9	35.6	29.4	26.4	24.0	20.4	21.1	29.5	36.6	41.4	45.5	45.6	50.7	53.3	50.1	50.2	45.6	44.4	42.0	41.1	36.3	41.2	39.7	Diurnal Maximum	

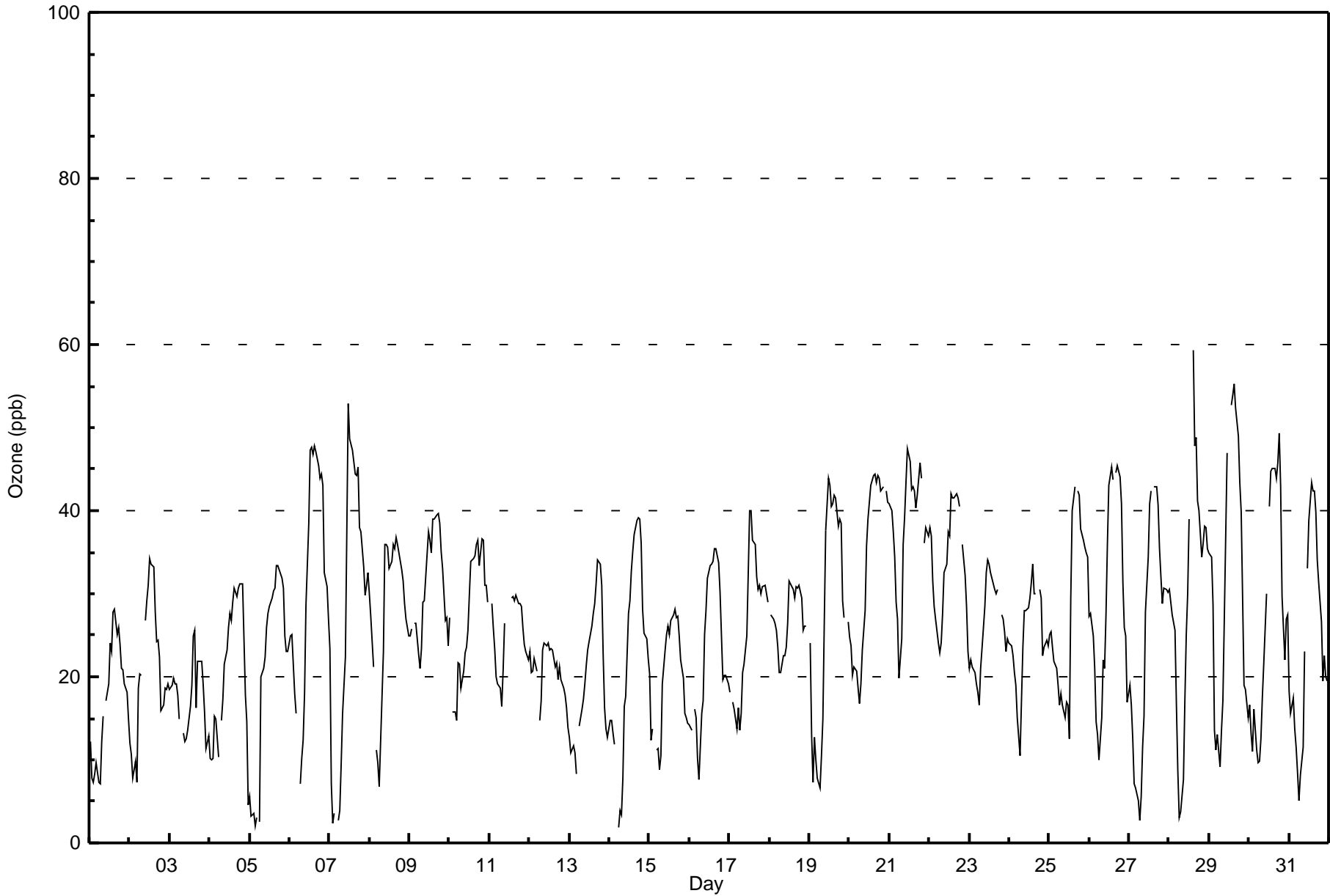
C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

# Hourly Averages for O<sub>3</sub> at Henry Pirker August 2009

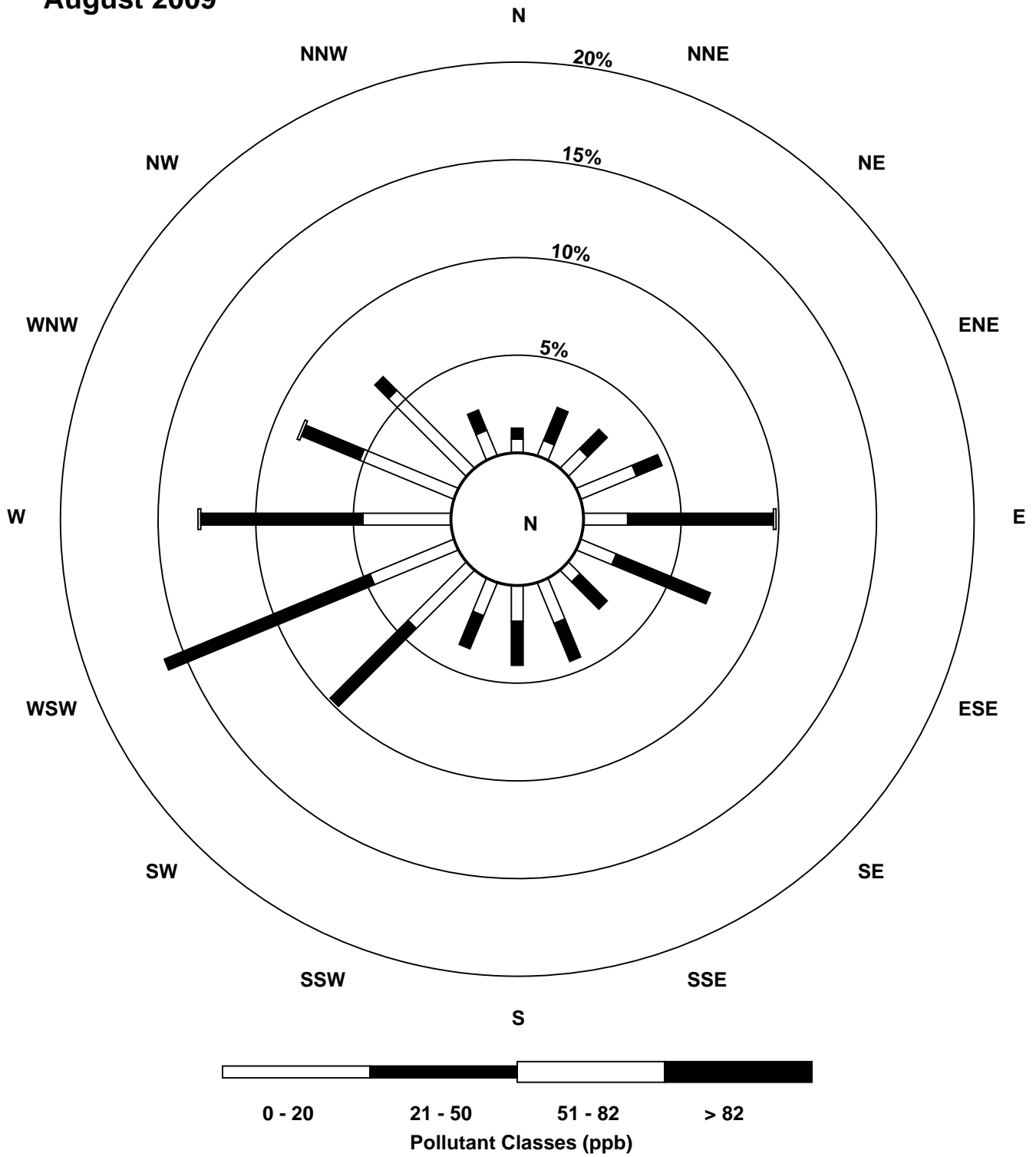




# Hourly Maximums for O<sub>3</sub> at Henry Pirker August 2009



# Pollutant Rose for O<sub>3</sub> at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Eight Hour Running Averages**

**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 47.1 ppb on Aug 29 19:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 2.2 ppb on Aug 5 07:00	
Percentiles: P <sub>1</sub> = 6.1 P <sub>10</sub> = 10.8 Q <sub>1</sub> = 16.1 Median = 22.5 Q <sub>3</sub> = 29.4 P <sub>90</sub> = 36.1 P <sub>99</sub> = 42.5	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	18	16	13	11	9	8	7	7	7	7	9	10	12	14	17	19	21	21	22	22	22	22	21	19	22.5
2-Aug	17	15	14	12	11	9	9	10	10	11	14	17	21	24	27	27	27	27	26	24	22	20	19	18	27.4
3-Aug	17	16	16	17	17	17	17	17	16	15	14	13	13	13	14	15	15	16	17	18	18	18	16	15	18.0
4-Aug	14	13	12	11	10	10	9	10	10	12	14	16	18	20	21	23	25	26	27	28	28	26	24	21	27.8
5-Aug	18	14	11	7	4	3	2	3	6	8	11	15	18	19	23	25	27	28	29	29	29	28	27	26	29.4
6-Aug	26	25	23	21	20	20	17	15	13	12	12	15	19	22	27	32	37	40	43	44	43	41	39	36	43.8
7-Aug	32	27	22	17	14	10	7	4	4	6	10	16	20	25	30	35	39	41	42	41	39	37	35	34	42.1
8-Aug	32	30	27	26	23	20	17	14	12	13	16	18	21	25	28	31	33	34	33	33	33	32	31	29	33.5
9-Aug	28	27	26	25	24	23	22	22	22	23	24	26	28	30	32	34	35	36	36	36	35	33	32	29	35.8
10-Aug	26	25	22	19	17	15	14	14	15	15	16	17	20	22	24	26	28	30	31	32	33	32	32	31	32.7
11-Aug	31	30	29	27	25	24	22	19	19	18	18	17	N	N	N	N	N	N	28	28	27	26	26	25	31.0
12-Aug	24	23	21	21	20	20	19	18	18	18	19	20	20	20	22	22	22	21	21	20	20	19	18	17	23.7
13-Aug	16	15	14	13	11	11	10	10	10	11	13	15	17	18	20	22	24	25	27	28	27	26	24	22	27.6
14-Aug	20	17	15	13	12	10	9	8	7	6	6	8	11	14	18	22	26	30	33	34	33	33	31	29	33.7
15-Aug	26	23	19	18	16	13	11	10	10	11	13	14	16	18	20	23	24	24	24	24	23	22	20	19	26.1
16-Aug	17	16	15	14	14	13	12	11	12	13	15	16	19	22	25	28	30	31	32	31	29	27	25	23	31.7
17-Aug	21	20	18	17	16	15	14	13	13	14	15	16	19	22	25	28	30	31	32	32	32	31	30	29	32.3
18-Aug	29	29	28	28	27	26	24	23	23	22	22	21	22	23	24	25	26	27	28	28	27	26	25	25	29.2
19-Aug	23	20	16	14	12	10	8	8	7	8	12	16	20	24	29	33	36	38	39	38	36	34	33	31	39.0
20-Aug	29	26	22	20	20	19	18	17	17	18	20	22	25	28	32	35	38	40	41	42	42	42	42	42	42.4
21-Aug	41	41	40	38	36	34	31	29	28	27	28	30	32	34	37	40	40	41	41	40	40	39	38	37	41.3
22-Aug	38	37	35	33	32	31	29	27	25	25	26	27	29	32	34	36	37	38	39	38	37	35	31	31	38.8
23-Aug	28	24	21	21	19	17	16	16	17	18	20	22	24	25	27	29	30	30	30	29	28	27	26	25	30.4
24-Aug	25	24	23	23	22	20	18	17	16	17	17	18	20	22	24	26	28	28	29	29	28	26	26	25	28.9
25-Aug	24	24	23	22	22	22	21	20	18	17	16	15	14	14	17	20	20	24	28	31	35	37	36	35	36.7
26-Aug	34	32	29	27	24	21	18	15	15	14	14	16	19	24	28	31	34	38	40	41	40	36	33	30	41.2
27-Aug	27	23	19	15	12	10	8	7	6	6	8	11	15	20	22	27	32	35	37	37	35	34	33	32	36.9
28-Aug	30	29	28	27	25	22	19	16	13	10	10	10	13	14	21	27	33	37	39	40	40	40	37	36	40.1
29-Aug	35	34	32	29	26	22	19	15	12	11	12	16	17	24	30	37	42	46	47	46	43	38	33	28	47.1
30-Aug	23	19	15	12	11	9	9	9	9	10	12	12	17	22	27	32	36	40	43	42	40	37	34	31	42.6
31-Aug	27	23	19	16	15	13	10	9	8	9	8	11	14	19	25	30	34	36	35	34	32	29	27	24	36.1
Diurnal Maximums																									
41.3 40.7 39.7 38.0 35.9 34.4 31.2 28.9 27.6 27.3 28.0 30.0 32.1 34.2 37.3 39.7 42.3 46.0 47.1 46.2 43.2 42.4 42.1 41.7																									

N - Not Valid  
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Carbon Monoxide (CO) - ppm  
August 1, 2009 to September 1, 2009**

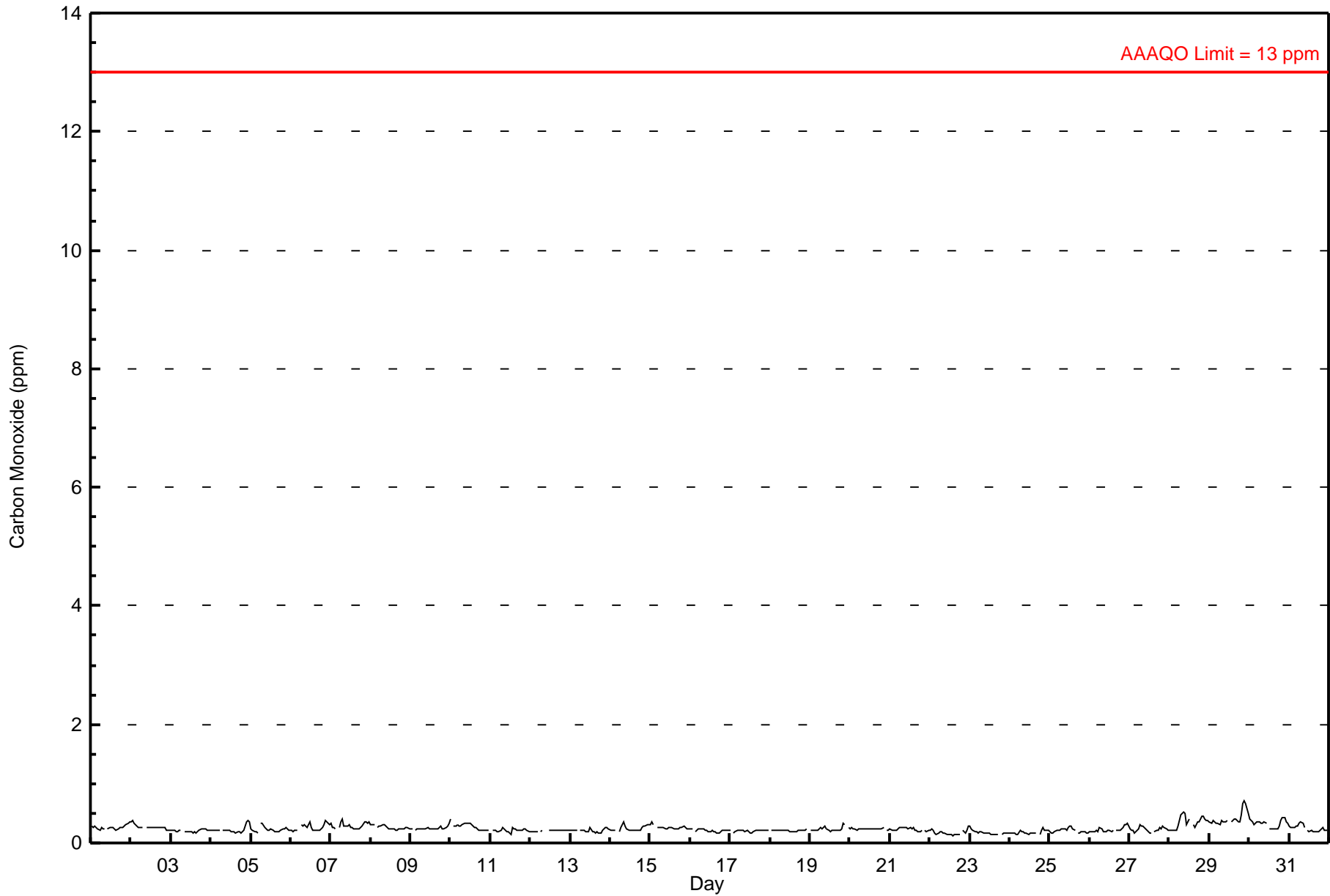
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 0.70 ppm on Aug 29 22:00	Maximum Daily Average: 0.41 ppm on Aug 29
Minimum Value: 0.1 ppm on Aug 22 15:00	Hours of Data: 709
Maximum Diurnal Average: 0.28 ppm at hour 22	Hours of Missing Data: 35
Monthly Average: 0.241 ppm	Hours of Calibration: 35
Minimum Daily Average: 0.17 ppm on Aug 23	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.21 ppm at hour 16	
Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.18 Q <sub>1</sub> = 0.20 Median = 0.22 Q <sub>3</sub> = 0.26 P <sub>90</sub> = 0.34 P <sub>99</sub> = 0.47	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	A	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.26	0.35
2-Aug	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.27	0.38
3-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.25
4-Aug	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.22	0.38
5-Aug	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.22	0.34
6-Aug	0.2	0.2	0.2	0.2	0.2	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.26	0.37
7-Aug	0.3	0.3	0.3	0.2	A	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.29	0.40
8-Aug	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.26	0.31
9-Aug	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.25	0.34
10-Aug	0.4	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	0.41
11-Aug	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.27
12-Aug	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.22
13-Aug	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.21	0.26
14-Aug	0.2	0.2	0.2	0.2	A	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.25	0.35
15-Aug	0.3	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.26	0.36
16-Aug	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.24
17-Aug	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.22
18-Aug	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.23
19-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.3	0.23	0.32
20-Aug	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.23	0.25
21-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.23	0.27
22-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.3	0.17	0.28
23-Aug	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.17	0.28
24-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.2	0.2	0.17	0.26
25-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.29
26-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.22	0.33
27-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.23	0.30
28-Aug	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.3	0.4	0.4	A	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.35	0.52
29-Aug	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	A	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.7	0.7	0.5	0.41	0.70
30-Aug	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.33	0.43
31-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.24	0.36
	0.25	0.24	0.23	0.22	0.22	0.23	0.26	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.22	0.21	0.22	0.22	0.23	0.25	0.28	0.28	0.27	0.26	Diurnal Average	
	0.41	0.38	0.38	0.35	0.35	0.35	0.39	0.48	0.52	0.50	0.36	0.37	0.39	0.36	0.38	0.41	0.41	0.35	0.36	0.47	0.66	0.70	0.66	0.50	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

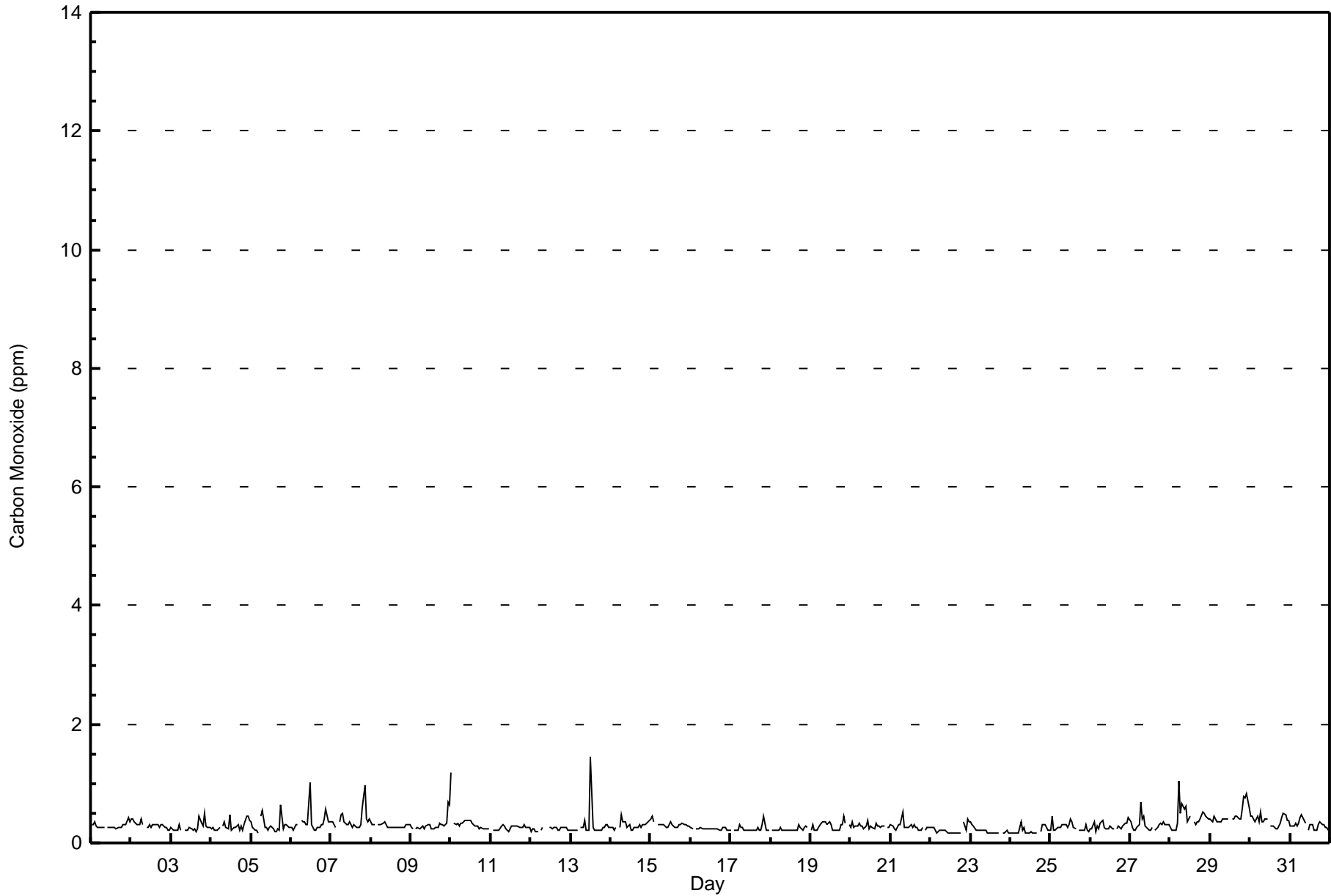


# Hourly Averages for CO at Henry Pirker August 2009

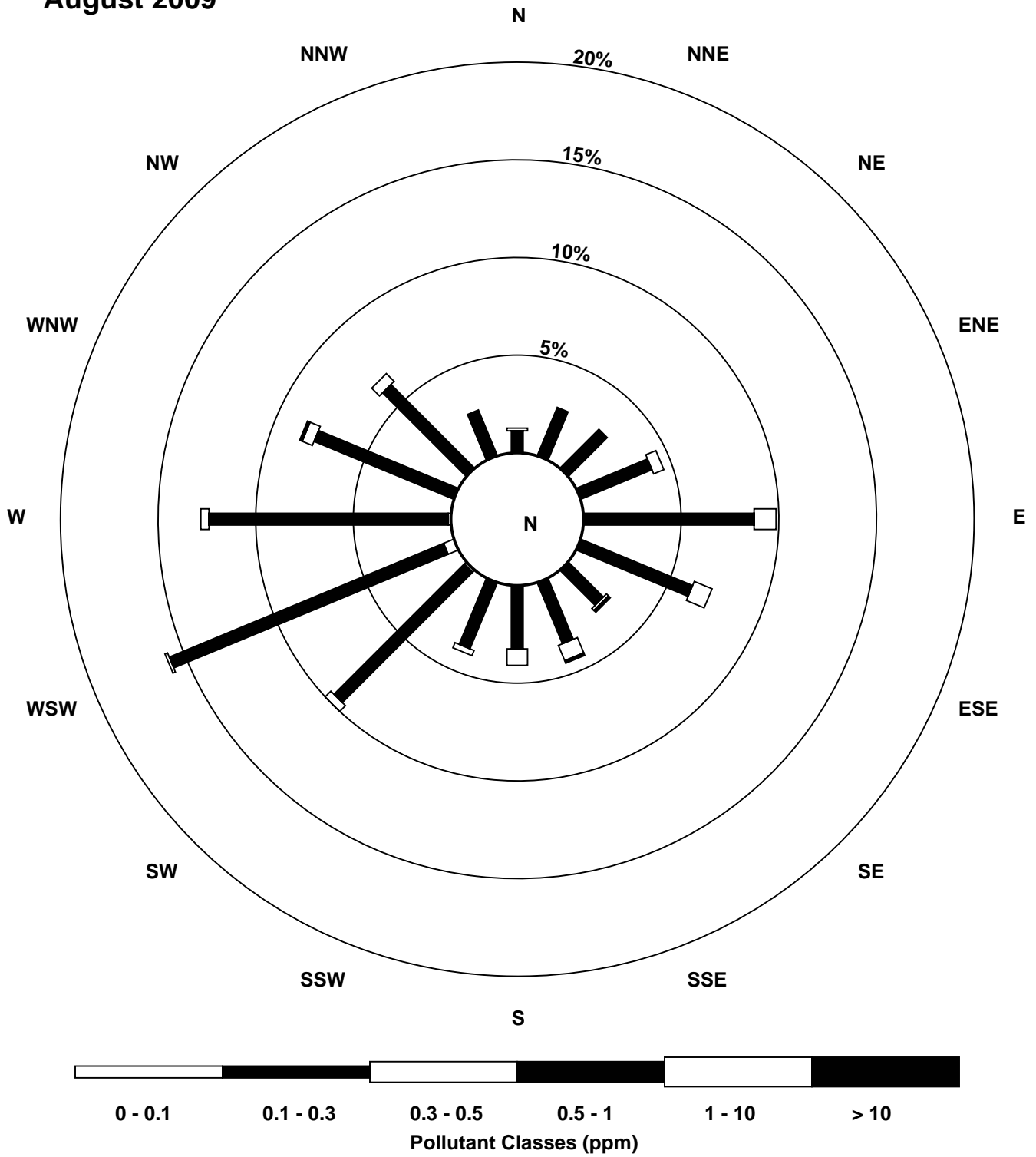




# Hourly Maximums for CO at Henry Pirker August 2009



# Pollutant Rose for CO at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Eight Hour Running Averages**

**Henry Pirker - Carbon Monoxide (CO) - ppm  
August 1, 2009 to September 1, 2009**

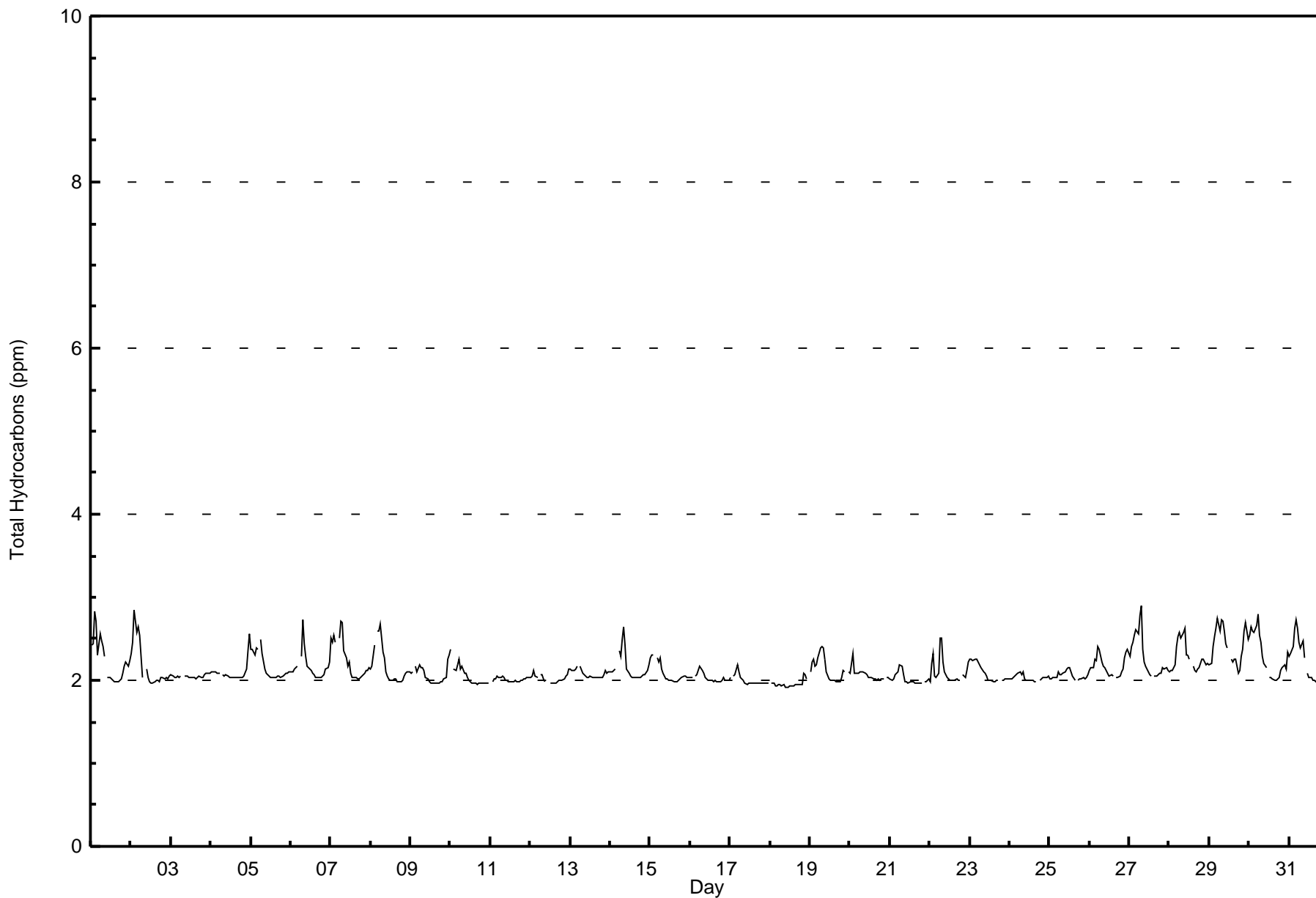
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.52 ppm on Aug 30 03:00	Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0
Minimum Value: 0.14 ppm on Aug 22 20:00	
Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.19 Q <sub>1</sub> = 0.21 Median = 0.23 Q <sub>3</sub> = 0.26 P <sub>90</sub> = 0.31 P <sub>99</sub> = 0.44	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.29
2-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.33
3-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
4-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.26
5-Aug	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
6-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.29
7-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
8-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.33
9-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.27
10-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.32
11-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
12-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
14-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.27
15-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.31
16-Aug	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
17-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
18-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
19-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
20-Aug	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
21-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
22-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.21
23-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
24-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
25-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
26-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.26
27-Aug	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
28-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.42
29-Aug	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.52
30-Aug	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.52
31-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35
	0.51	0.52	0.52	0.50	0.46	0.42	0.38	0.36	0.35	0.35	0.37	0.38	0.41	0.42	0.41	0.38	0.38	0.38	0.38	0.39	0.43	0.47	0.50	0.52	
	Diurnal Maximums																								

N - Not Valid  
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm



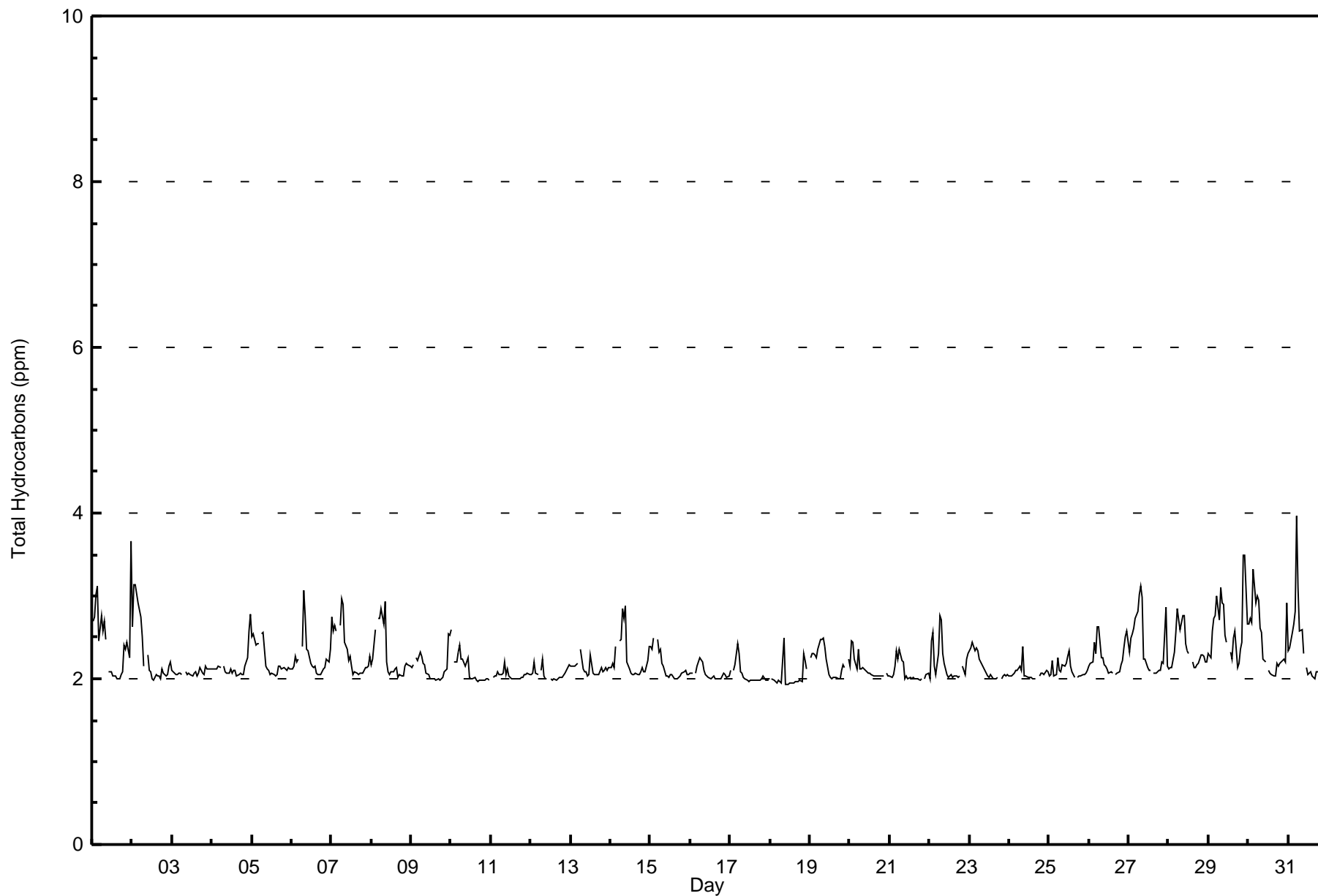
# Hourly Averages for THC at Henry Pirker August 2009



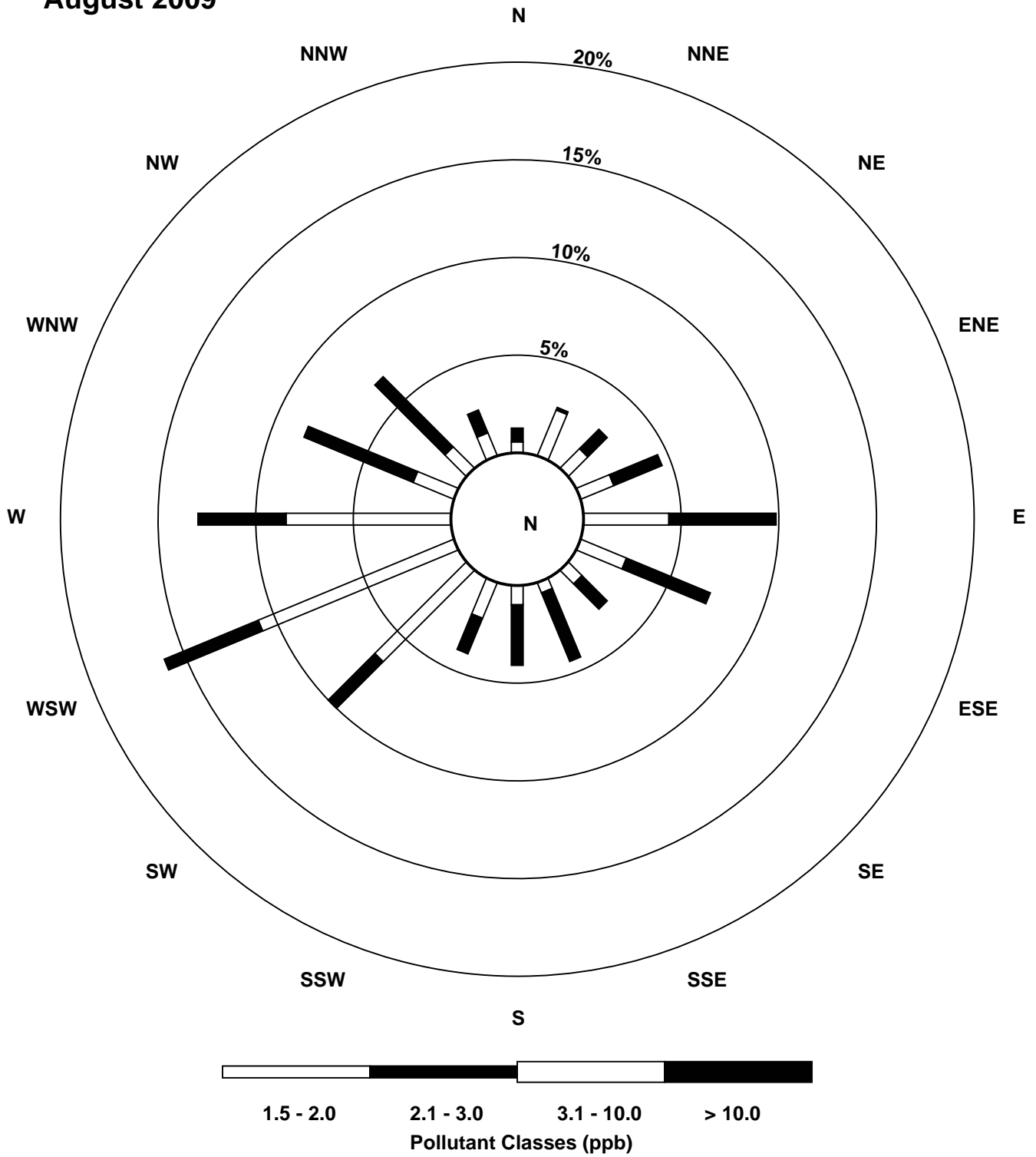




# Hourly Maximums for THC at Henry Pirker August 2009



# Pollutant Rose for THC at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

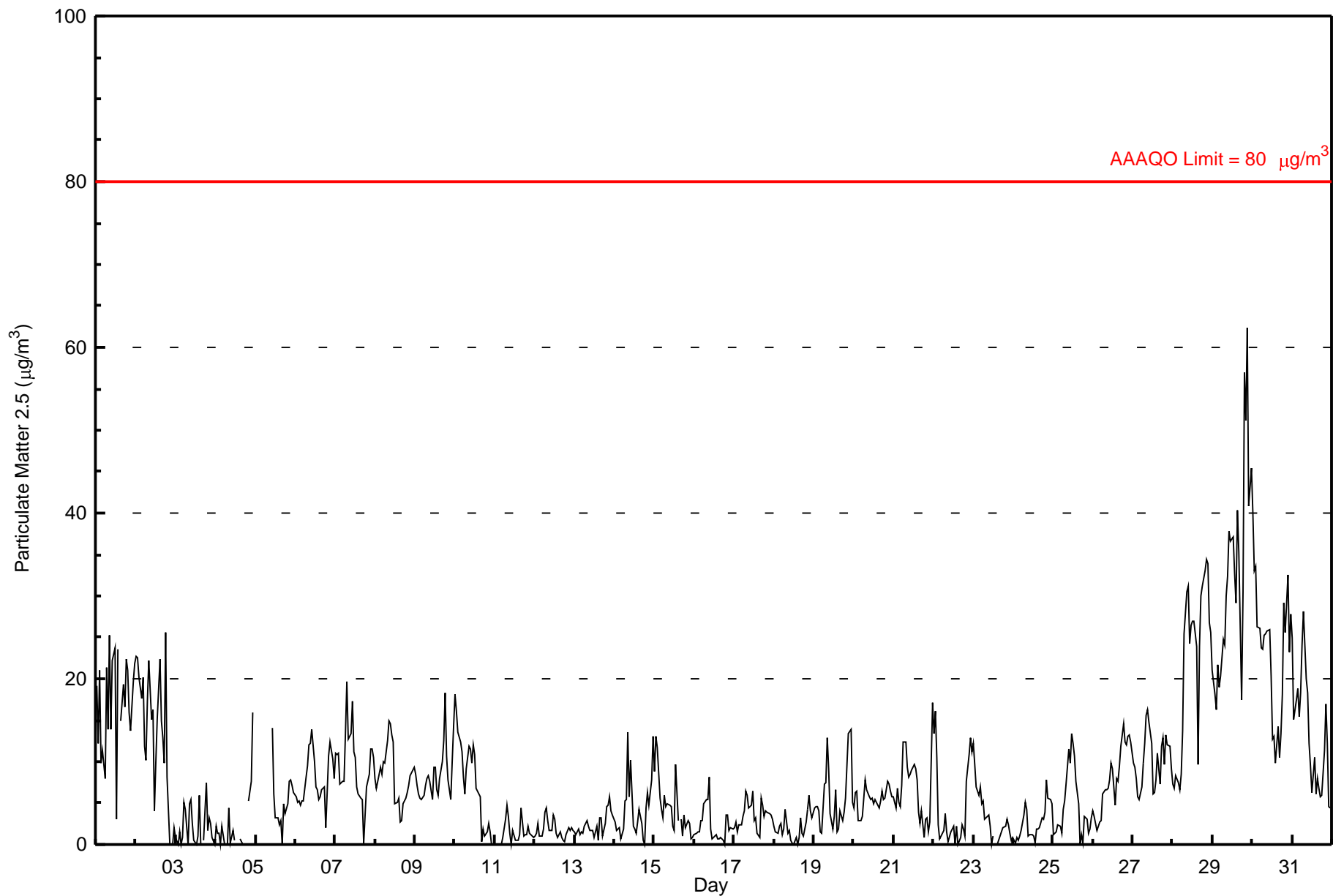
**Henry Pirker - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAQO): 1-hr: 0 24-hr: 1	Hours in Service: 744
Maximum Value: 62.3 µg/m <sup>3</sup> on Aug 29 22:00	Maximum Daily Average: 32.6 µg/m <sup>3</sup> on Aug 29
Minimum Value: 0 µg/m <sup>3</sup> on Aug 3 02:00	Hours of Data: 724
Maximum Diurnal Average: 11.0 µg/m <sup>3</sup> at hour 9	Hours of Missing Data: 20
Monthly Average: 8.03 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 1.3 µg/m <sup>3</sup> on Aug 11	Percent Operational Time: 97.3
Minimum Diurnal Average: 6.0 µg/m <sup>3</sup> at hour 6	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 2.0 Median = 5.4 Q <sub>3</sub> = 10.8 P <sub>90</sub> = 20.1 P <sub>99</sub> = 39.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	19	12	21	10	11	8	21	14	25	14	22	24	3	23	BD	15	19	17	22	21	16	14	20	22	17.1	25.3																							
2-Aug	23	23	20	18	20	12	10	17	22	15	16	4	10	15	22	15	13	10	26	8	0	BD	0	2	14.0	25.6																							
3-Aug	1	0	2	0	1	5	4	0	5	5	2	1	0	1	6	0	BD	0	8	2	3	3	1	0	2.1	7.5																							
4-Aug	2	1	1	0	2	0	0	0	4	0	2	1	BD	1	BD	1	0	BD	0	BD	5	8	16	N	2.3	15.8																							
5-Aug	N	N	N	N	N	N	N	N	N	N	14	6	3	3	2	3	0	5	4	5	8	8	7	6	--	14.0																							
6-Aug	6	5	5	5	5	5	8	9	12	12	14	10	7	7	5	6	7	7	2	6	11	12	10	8	7.7	13.9																							
7-Aug	11	11	11	7	8	8	13	20	13	13	17	11	11	7	6	6	5	0	4	7	8	11	12	10	9.6	19.7																							
8-Aug	8	7	8	9	9	10	10	13	15	14	13	12	5	5	6	3	3	5	6	6	7	8	9	9	8.3	15.0																							
9-Aug	9	7	6	6	5	6	7	8	8	8	5	9	9	7	6	8	10	13	18	11	8	5	10	14	8.5	18.3																							
10-Aug	18	16	13	12	11	8	6	9	12	12	10	12	11	7	6	6	0	2	1	2	3	1	0	0	7.4	18.1																							
11-Aug	0	0	0	0	0	1	3	5	3	1	0	2	0	0	0	1	4	1	1	1	2	1	1	1	1.3	4.7																							
12-Aug	1	1	2	1	1	2	4	4	3	2	2	4	3	1	1	1	1	0	0	1	2	2	2	2	1.8	4.3																							
13-Aug	2	1	2	1	1	1	2	3	2	2	2	2	1	2	1	3	3	1	3	5	5	6	4	4	2.4	5.7																							
14-Aug	3	2	2	2	1	2	5	5	14	6	10	2	2	1	3	4	3	0	0	4	6	5	8	13	4.3	13.5																							
15-Aug	9	13	12	6	4	3	6	5	5	5	5	2	2	10	3	BD	3	1	3	2	3	3	1	1	4.5	13.1																							
16-Aug	1	1	1	1	3	3	5	5	5	8	2	1	1	1	1	1	1	0	0	4	4	2	2	2	2.3	8.2																							
17-Aug	2	3	2	2	2	3	4	6	6	4	5	6	3	3	1	1	6	5	3	4	4	4	4	3	3.6	6.4																							
18-Aug	2	2	1	2	3	1	2	4	1	2	1	0	0	1	0	1	3	1	1	3	4	6	4	3	2.0	5.9																							
19-Aug	4	5	5	4	1	1	7	8	13	9	4	2	3	7	1	2	4	3	4	6	10	13	14	5	5.6	13.9																							
20-Aug	4	6	7	3	3	3	6	8	7	6	5	6	5	5	5	4	5	6	5	6	8	7	7	6	5.5	7.8																							
21-Aug	6	4	7	5	5	7	12	12	9	8	9	9	10	9	8	4	3	4	1	3	3	2	3	17	6.6	17.2																							
22-Aug	13	16	10	2	1	1	2	4	2	0	2	2	2	0	2	0	1	2	2	2	1	8	11	13	11	4.5	16.1																						
23-Aug	12	10	7	6	7	5	5	3	3	4	2	0	1	BD	0	1	1	2	2	2	3	2	1	0	3.4	12.1																							
24-Aug	1	0	1	1	1	2	4	5	4	1	1	1	1	0	2	2	2	3	3	4	8	6	5	5	2.6	7.8																							
25-Aug	1	1	1	2	2	1	4	5	7	12	10	13	12	11	8	5	0	1	0	3	3	1	2	3	4.6	13.3																							
26-Aug	4	3	2	2	3	3	6	7	7	7	8	10	9	5	8	8	10	12	15	12	12	13	13	12	7.9	14.6																							
27-Aug	10	9	8	6	5	7	10	12	16	16	15	12	6	6	8	11	7	12	13	10	13	12	12	9	10.2	16.3																							
28-Aug	7	7	8	7	7	9	14	25	30	31	24	26	27	27	24	10	24	30	31	33	34	34	27	26	21.8	34.4																							
29-Aug	21	18	16	22	19	20	25	24	30	32	38	37	37	33	29	40	35	18	30	57	51	62	41	45	32.6	62.3																							
30-Aug	40	33	34	26	26	24	24	25	25	26	26	20	13	13	10	14	11	13	18	29	26	33	23	28	23.3	40.0																							
31-Aug	25	15	17	19	15	18	24	28	20	18	12	10	6	11	6	8	7	6	6	11	17	12	5	4	13.4	28.1																							
																								8.8	7.8	7.8	6.3	6.1	6.0	8.5	9.8	11.0	9.8	9.6	8.3	6.8	7.4	6.2	6.1	6.3	6.0	7.5	8.9	9.5	10.2	8.9	9.1	Diurnal Average	
																								40.0	33.0	33.5	26.3	26.1	23.8	24.8	28.1	30.5	32.3	37.8	36.7	37.1	32.7	29.2	40.4	35.2	30.1	31.2	57.0	51.2	62.3	40.8	45.5	Diurnal Maximum	

P - Power Failure      N - Not Valid      BD - Baseline Drift  
 Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m<sup>3</sup>      Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m<sup>3</sup>

# Hourly Averages for PM<sub>2.5</sub> at Henry Pirker August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

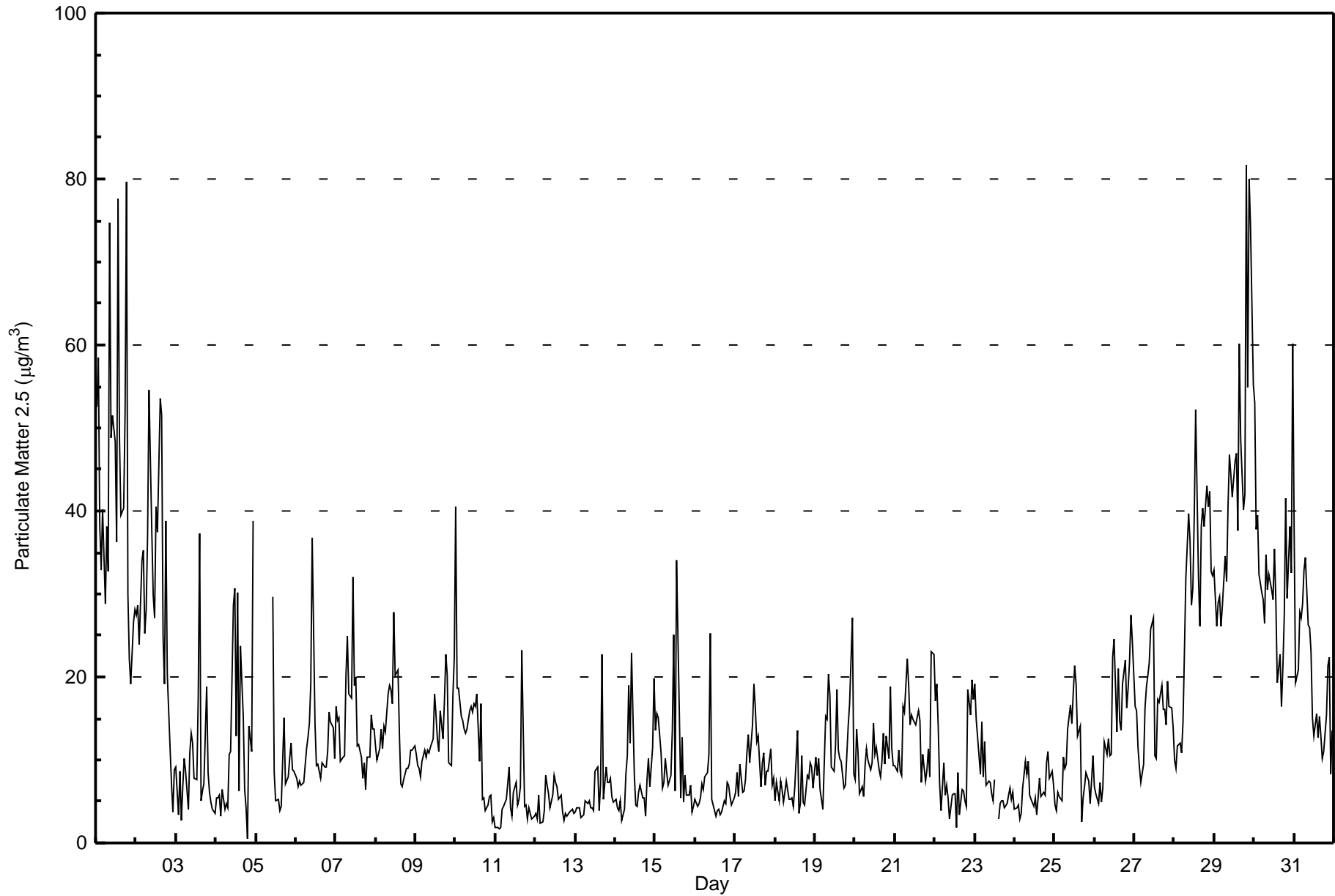
**Henry Pirker - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

Maximum Value: 81.7 µg/m <sup>3</sup> on Aug 29 20:00	Maximum Daily Average: 45.0 µg/m <sup>3</sup> on Aug 29	Hours in Service: 744
Minimum Value: 1 µg/m <sup>3</sup> on Aug 4 20:00	Minimum Daily Average: 4.7 µg/m <sup>3</sup> on Aug 12	Hours of Data: 732
Maximum Diurnal Average: 18.9 µg/m <sup>3</sup> at hour 14	Minimum Diurnal Average: 11.1 µg/m <sup>3</sup> at hour 5	Hours of Missing Data: 12
Monthly Average: 14.77 µg/m <sup>3</sup>	Percentiles: P <sub>1</sub> = 2.5 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 6.2 Median = 10.3 Q <sub>3</sub> = 18.6 P <sub>90</sub> = 32.7 P <sub>99</sub> = 48.8	Hours of Calibration: 0
		Percent Operational Time: 98.4

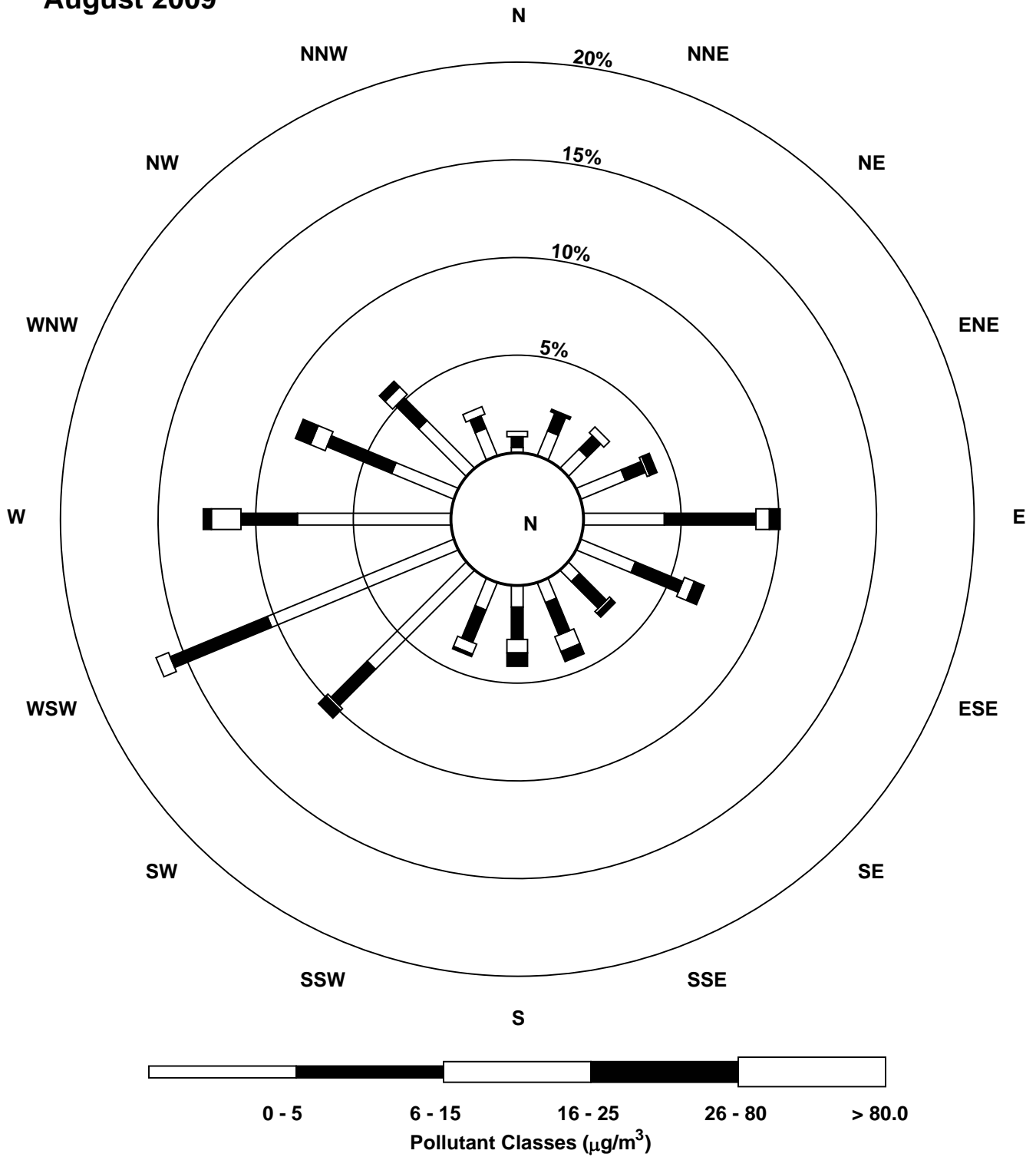
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	53	58	38	33	40	29	38	33	75	49	51	48	36	78	49	39	40	52	80	30	22	19	27	28	43.6	79.6				
2-Aug	27	29	24	34	35	25	28	37	55	38	30	27	41	37	54	52	25	19	39	20	11	7	4	9	29.4	54.5				
3-Aug	9	3	9	3	7	10	9	4	11	13	12	8	8	18	37	5	6	7	19	9	6	5	4	4	9.4	37.3				
4-Aug	5	5	6	3	6	4	5	4	11	11	29	31	13	30	6	24	15	6	4	1	14	11	39	N	12.3	38.8				
5-Aug	N	N	N	N	N	N	N	N	N	N	30	8	5	5	4	4	10	15	7	8	10	12	9	9	--	29.7				
6-Aug	8	7	8	7	7	7	11	13	14	19	37	14	9	9	9	8	10	9	9	11	16	15	14	10	11.7	36.8				
7-Aug	16	15	15	10	10	10	20	25	18	18	32	19	20	12	12	10	8	10	6	10	10	15	14	14	14.6	32.0				
8-Aug	12	10	11	14	11	14	13	18	19	18	17	28	20	21	13	7	7	8	9	9	9	11	11	12	13.4	27.7				
9-Aug	11	9	9	8	10	11	10	11	11	11	13	18	15	13	11	16	13	17	23	20	10	9	18	22	13.3	22.7				
10-Aug	40	19	19	15	15	14	13	14	16	17	16	17	16	18	10	17	16	18	10	17	5	5	4	5	6	6	3	3	12.9	40.5
11-Aug	2	2	2	2	4	4	5	7	9	4	3	6	7	5	5	7	23	4	5	3	4	4	3	3	5.1	23.2				
12-Aug	3	3	6	2	3	4	8	7	6	4	6	8	7	7	5	6	4	3	4	3	4	4	4	4	4.7	8.1				
13-Aug	4	4	4	3	3	3	5	5	5	4	4	4	9	9	4	7	23	5	9	7	7	8	6	5	6.2	22.8				
14-Aug	5	4	4	5	3	4	8	11	19	12	23	8	5	4	6	7	5	5	3	8	10	7	12	20	8.3	22.9				
15-Aug	14	16	15	11	7	7	10	8	7	8	14	25	6	34	15	5	13	5	8	6	6	7	4	4	10.6	34.0				
16-Aug	5	4	5	5	7	6	8	8	11	25	5	5	3	4	4	3	4	5	5	7	7	6	5	5	6.4	25.2				
17-Aug	6	8	6	10	6	6	8	11	13	10	14	19	16	12	13	7	10	11	7	9	9	11	7	8	9.8	19.2				
18-Aug	5	7	5	7	7	5	6	7	5	5	5	4	7	14	4	5	10	5	4	8	8	10	9	7	6.7	13.6				
19-Aug	10	8	10	6	5	4	15	15	20	18	9	9	12	18	11	10	10	7	7	10	14	17	27	8	11.8	27.1				
20-Aug	8	14	11	6	7	6	9	11	10	9	10	14	11	11	9	8	10	13	10	13	10	19	11	9	10.3	18.8				
21-Aug	9	9	11	9	8	16	16	22	19	14	15	15	14	15	16	15	7	11	7	9	11	8	23	23	13.5	23.1				
22-Aug	17	19	14	7	4	10	6	7	5	3	6	6	6	2	8	3	6	6	5	4	19	16	20	17	9.0	19.6				
23-Aug	19	15	13	8	15	8	12	7	8	7	6	5	8	P	3	5	5	5	4	5	6	7	5	6	7.9	19.1				
24-Aug	4	4	5	3	3	7	10	8	10	6	5	4	6	3	5	8	6	6	6	10	11	8	9	7	6.4	11.1				
25-Aug	5	4	6	6	5	10	9	10	14	17	14	18	21	19	13	14	3	5	7	8	8	5	8	11	9.9	21.3				
26-Aug	7	6	5	7	5	7	12	11	13	10	11	22	25	13	21	15	14	19	22	16	19	22	28	24	14.7	27.5				
27-Aug	16	16	11	9	7	10	16	19	20	22	26	27	10	10	17	17	19	16	16	14	20	16	16	14	16.1	27.1				
28-Aug	10	9	12	12	11	15	23	32	40	36	29	31	39	52	32	26	38	40	38	43	41	42	33	32	29.8	52.3				
29-Aug	33	26	29	30	26	29	35	31	41	47	44	42	46	47	38	60	49	40	42	82	55	80	74	55	45.0	81.7				
30-Aug	53	38	39	32	30	29	27	35	30	32	31	29	35	29	19	23	16	21	27	42	30	38	33	60	32.5	60.1				
31-Aug	38	19	21	28	27	29	33	34	26	26	23	15	13	16	13	15	13	10	11	15	21	22	8	14	20.4	37.8				
	15.2	13.0	12.4	11.2	11.1	11.5	14.3	15.5	18.7	17.1	18.3	17.3	15.8	18.9	15.0	14.4	13.7	12.7	14.4	14.3	13.9	15.0	15.6	14.9		Diurnal Average				
	53.0	58.5	39.5	34.1	40.2	29.3	38.2	37.1	74.8	48.7	51.5	48.3	46.0	77.6	53.6	60.2	48.6	51.9	79.6	81.7	54.9	80.1	74.2	60.1		Diurnal Maximum				

P - Power Failure      N - Not Valid

# Hourly Maximums for PM<sub>2.5</sub> at Henry Pirker August 2009



# Pollutant Rose for PM<sub>2.5</sub> at Henry Pirker August 2009



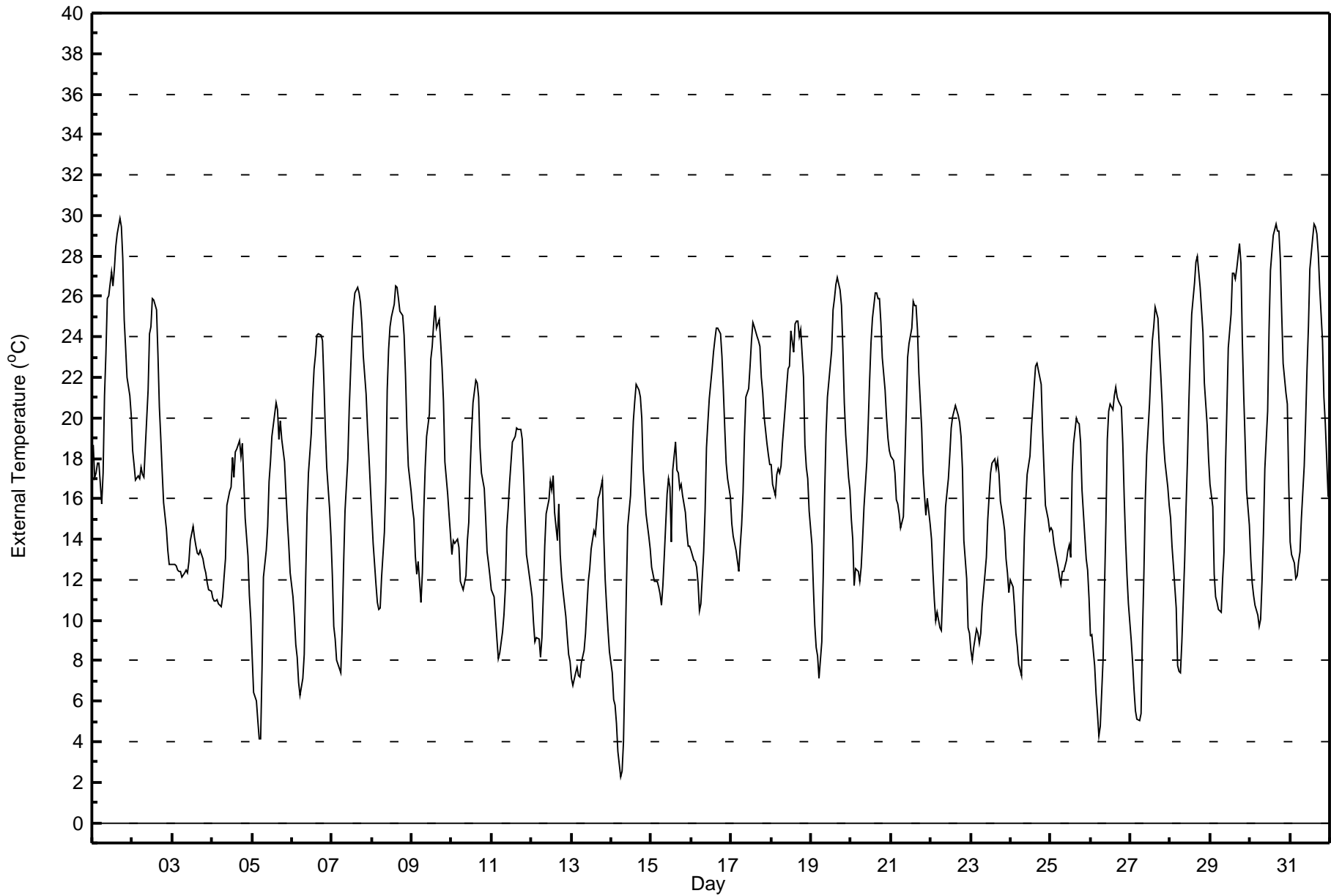
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

Maximum Value: 29.8 °C on Aug 1 17:00		Maximum Daily Average: 23.1 °C on Aug 1																				Hours in Service: 744					
Minimum Value: 2 °C on Aug 14 06:00		Minimum Daily Average: 11.1 °C on Aug 13																				Hours of Data: 744					
Maximum Diurnal Average: 22.8 °C at hour 16		Minimum Diurnal Average: 10.0 °C at hour 6																				Hours of Missing Data: 0					
Monthly Average: 16.58 °C		Percentiles: P <sub>1</sub> = 4.8 P <sub>10</sub> = 9.2 Q <sub>1</sub> = 12.3 Median = 16.3 Q <sub>3</sub> = 20.8 P <sub>90</sub> = 24.8 P <sub>99</sub> = 29.2																				Hours of Calibration: 0					
		Percent Operational Time: 100.0																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	19	17	17	18	18	16	17	21	23	26	26	27	27	27	28	29	30	29	28	25	23	22	21	20	23.1	29.8	
2-Aug	18	18	17	17	17	18	17	17	18	21	24	25	26	26	25	23	21	19	17	16	14	13	13	13	18.9	25.9	
3-Aug	13	13	13	12	12	12	12	12	12	12	13	14	15	14	14	13	13	13	13	13	12	12	12	11	12.8	14.7	
4-Aug	11	11	11	11	11	11	11	12	13	16	16	17	18	17	18	18	19	18	19	17	15	13	11	10	14.4	18.9	
5-Aug	8	6	6	5	4	4	8	12	13	15	17	18	19	20	21	20	19	20	19	18	16	15	14	12	13.7	20.7	
6-Aug	11	10	9	8	7	6	7	8	12	15	17	19	21	22	23	24	24	24	24	22	19	18	16	14	15.9	24.1	
7-Aug	12	10	9	8	8	7	10	13	15	18	20	22	24	25	26	26	26	26	25	23	21	19	18	17	17.9	26.4	
8-Aug	15	14	12	11	11	11	12	14	17	21	23	25	25	26	26	26	26	25	25	24	22	19	18	16	19.4	26.5	
9-Aug	16	15	13	12	13	11	12	15	18	19	20	23	24	25	26	24	25	24	22	21	18	16	15	14	18.4	25.5	
10-Aug	13	14	14	14	14	12	12	12	12	14	15	17	19	21	22	22	21	18	17	17	15	13	13	12	15.5	21.8	
11-Aug	11	11	10	9	8	8	9	10	12	15	16	17	19	19	19	20	19	19	19	17	15	13	13	12	14.2	19.5	
12-Aug	11	10	9	9	9	8	9	11	14	15	16	17	16	17	15	14	16	13	12	11	10	9	8	8	12.1	17.1	
13-Aug	7	7	7	8	7	7	8	9	9	11	12	13	14	14	14	15	16	16	17	14	12	11	9	8	11.1	16.9	
14-Aug	7	6	6	5	4	2	3	4	8	11	15	16	18	20	21	22	21	21	20	18	16	15	14	14	12.7	21.6	
15-Aug	13	12	12	12	12	11	11	12	13	16	17	17	14	17	19	17	17	17	17	16	15	14	14	14	14.5	18.8	
16-Aug	13	13	13	13	12	10	11	13	15	19	20	21	22	23	24	24	24	24	23	21	19	18	17	16	17.9	24.4	
17-Aug	15	14	14	13	12	14	15	16	19	21	21	23	24	25	25	24	24	24	22	21	20	19	18	18	19.2	24.7	
18-Aug	18	17	16	17	17	17	18	19	21	22	22	23	24	23	25	25	25	24	24	22	19	18	17	15	20.3	24.8	
19-Aug	14	12	10	9	8	7	9	12	16	19	21	23	23	25	26	27	27	26	26	23	21	19	17	16	18.2	27.0	
20-Aug	15	14	12	13	12	12	13	14	16	18	20	22	24	25	26	26	26	26	25	23	21	20	19	18	19.1	26.1	
21-Aug	18	18	17	16	16	15	15	15	18	20	23	24	24	26	26	26	24	22	19	17	16	15	16	15	19.2	25.8	
22-Aug	14	12	11	10	10	10	9	12	14	16	17	18	19	20	20	21	20	20	19	17	14	12	10	9	14.8	20.6	
23-Aug	9	8	9	10	9	9	9	11	12	13	15	16	17	18	18	17	18	17	16	15	14	13	12	11	13.2	18.0	
24-Aug	12	12	11	9	9	8	7	11	14	16	17	18	20	21	22	23	23	22	22	19	17	16	15	14	15.7	22.7	
25-Aug	15	14	14	13	13	12	12	12	12	13	13	14	13	17	19	20	20	20	19	16	14	13	12	11	14.7	20.0	
26-Aug	9	9	8	6	5	4	5	8	12	15	19	20	21	20	21	22	21	21	21	19	16	14	12	11	14.1	21.5	
27-Aug	9	8	7	6	5	5	5	9	12	16	18	21	22	24	24	25	25	23	22	21	19	18	17	16	15.7	25.5	
28-Aug	15	14	13	11	8	7	7	9	13	16	18	21	23	25	27	28	28	27	26	24	22	21	20	18	18.3	28.0	
29-Aug	17	16	12	11	11	11	10	12	13	18	20	23	25	27	27	27	27	29	28	24	21	19	16	15	19.1	28.6	
30-Aug	13	12	11	11	10	10	10	12	14	18	20	24	27	28	29	30	29	29	29	28	25	23	21	21	17	19.7	29.6
31-Aug	14	13	13	12	12	13	13	15	18	20	22	25	27	29	30	29	29	28	26	24	21	20	18	16	20.3	29.6	
		13.1	12.2	11.4	10.9	10.5	10.0	10.5	12.4	14.5	16.9	18.6	20.0	21.1	22.2	22.7	22.8	22.7	22.1	21.3	19.5	17.6	16.1	15.0	14.0	Diurnal Average	
		18.7	17.9	17.3	17.8	17.8	17.6	17.6	21.1	23.2	25.9	26.1	27.2	27.3	28.9	29.6	29.6	29.8	29.5	27.8	25.2	23.4	22.0	21.1	20.1	Diurnal Maximum	



# Hourly Averages for External Temperature at Henry Pirker August 2009

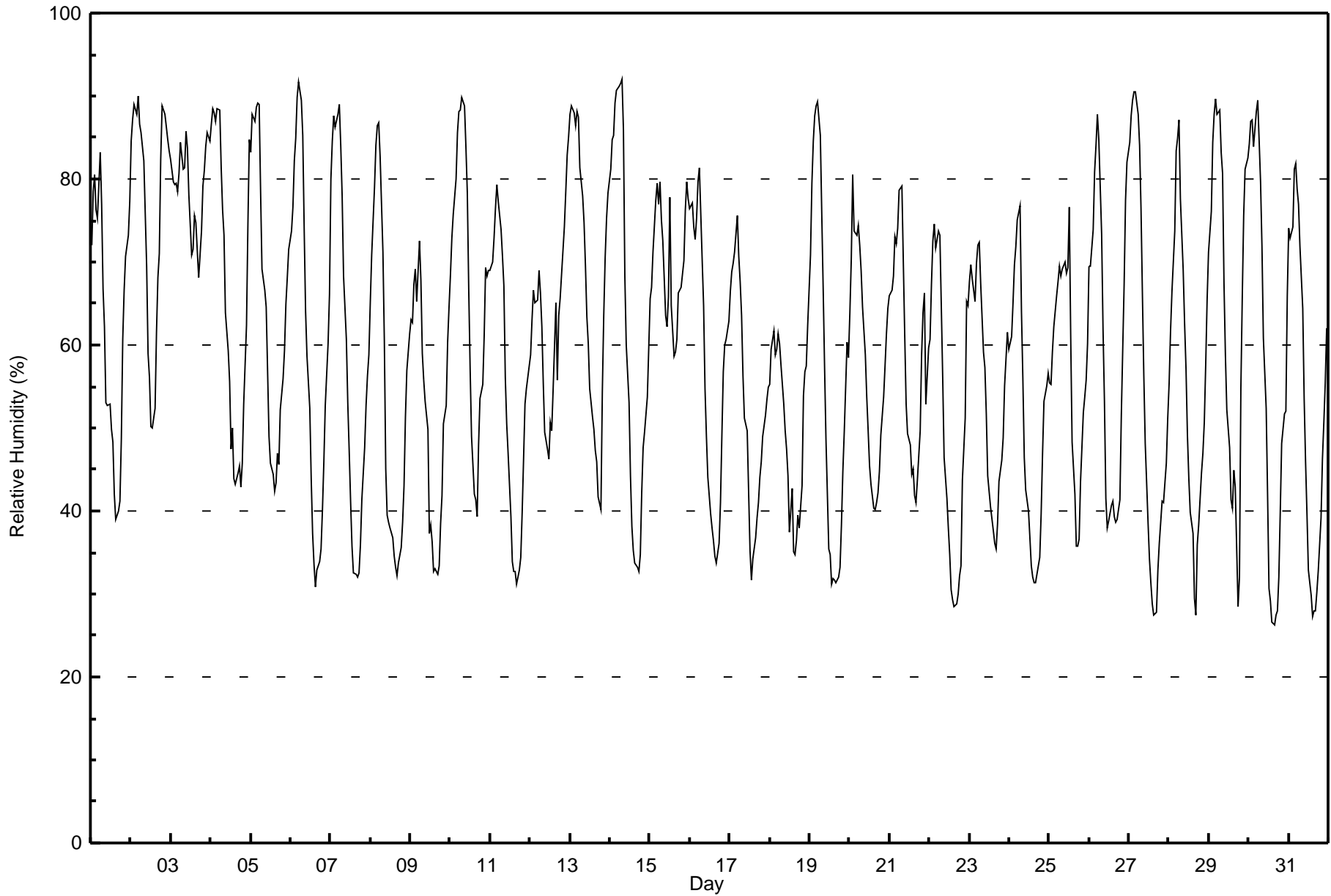


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Relative Humidity (RH) - %  
August 1, 2009 to September 1, 2009**

Maximum Value: 92.1 % on Aug 14 08:00		Maximum Daily Average: 79.0 % on Aug 3		Hours in Service: 744																						
Minimum Value: 26 % on Aug 30 16:00		Minimum Daily Average: 50.2 % on Aug 18		Hours of Data: 744																						
Maximum Diurnal Average: 81.0 % at hour 6		Minimum Diurnal Average: 39.1 % at hour 17		Hours of Missing Data: 0																						
Monthly Average: 59.66 %		Percentiles: P <sub>1</sub> = 28.0 P <sub>10</sub> = 34.7 Q <sub>1</sub> = 43.8 Median = 60.2 Q <sub>3</sub> = 74.2 P <sub>90</sub> = 84.8 P <sub>99</sub> = 90.4		Hours of Calibration: 0																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	72	79	80	76	75	83	77	67	62	53	53	50	48	42	39	40	41	49	61	67	71	73	77	62.0	83.2	
2-Aug	85	87	89	88	90	87	86	84	82	69	59	56	50	52	62	68	71	82	89	88	86	85	83	76.2	90.0	
3-Aug	82	80	79	79	78	81	84	81	81	86	84	78	71	72	76	75	71	68	74	79	81	84	86	85	79.0	85.7
4-Aug	87	88	88	87	88	88	81	76	73	64	59	56	47	50	44	43	45	45	43	46	53	62	75	85	65.6	88.4
5-Aug	83	88	87	89	89	89	79	69	67	65	57	49	46	44	42	43	47	46	52	56	59	65	68	72	64.6	89.2
6-Aug	74	77	82	85	90	92	89	85	74	64	59	52	44	37	34	31	33	34	35	40	46	53	60	66	59.8	91.6
7-Aug	80	85	88	86	88	89	84	78	68	61	53	47	41	36	33	32	32	33	36	41	48	53	56	59	58.6	89.0
8-Aug	65	71	79	84	87	87	83	71	61	45	40	39	38	37	35	33	32	34	36	39	43	51	57	61	54.4	86.8
9-Aug	63	63	67	69	65	73	68	59	56	53	50	37	38	36	33	33	32	33	38	42	51	53	60	65	51.6	72.5
10-Aug	69	73	76	80	86	88	88	90	89	84	78	67	57	49	42	41	39	48	54	55	61	69	68	69	67.5	89.9
11-Aug	69	70	73	76	79	77	74	71	67	56	50	47	39	34	33	33	31	33	34	40	46	53	55	58	54.1	79.3
12-Aug	59	63	67	65	65	69	66	62	55	49	47	46	51	50	55	65	56	63	66	69	74	78	83	85	62.9	85.1
13-Aug	88	89	88	86	88	88	81	78	75	69	63	60	55	51	50	47	46	42	40	54	64	71	75	78	67.8	88.9
14-Aug	81	85	85	89	91	91	92	92	86	68	60	53	44	38	35	34	33	33	35	42	48	50	54	60	61.6	92.1
15-Aug	66	67	71	77	80	77	80	75	73	64	62	66	78	65	59	59	61	66	67	67	70	76	80	78	70.0	79.7
16-Aug	77	77	74	73	75	80	81	70	65	55	49	44	40	38	36	35	34	36	41	49	57	60	61	63	57.0	81.4
17-Aug	67	69	70	71	76	71	68	63	56	51	50	42	35	32	34	37	39	41	44	46	49	52	53	55	52.9	75.6
18-Aug	55	60	62	59	59	61	60	58	53	50	47	44	37	43	35	35	36	40	38	43	54	57	57	62	50.2	62.3
19-Aug	71	79	85	88	89	89	85	76	67	57	49	35	35	31	32	32	31	32	33	38	45	50	60	59	56.2	89.4
20-Aug	64	70	81	74	73	74	72	69	65	59	54	50	45	43	40	40	41	42	45	49	54	58	61	64	57.8	80.6
21-Aug	66	67	68	73	72	74	79	79	70	61	53	49	48	44	45	42	41	44	50	59	64	66	53	60	59.4	79.2
22-Aug	61	67	73	75	72	74	73	65	56	47	42	38	35	30	29	28	29	30	32	33	44	51	65	65	50.5	74.6
23-Aug	68	70	68	65	70	72	72	67	59	57	52	44	42	41	38	36	35	38	44	46	49	55	58	62	54.5	72.4
24-Aug	60	61	65	70	72	75	77	64	56	47	43	40	37	33	32	31	31	33	34	40	47	53	55	57	50.5	76.8
25-Aug	55	55	59	62	66	68	69	68	69	70	69	69	77	61	48	42	36	36	37	44	52	54	56	60	57.6	76.7
26-Aug	69	70	74	81	84	88	85	73	62	53	41	38	39	41	41	39	39	39	41	52	60	67	77	82	59.8	87.8
27-Aug	84	88	90	90	91	88	84	76	66	56	48	39	34	31	29	27	28	33	36	39	41	41	46	51	55.7	90.6
28-Aug	55	62	66	74	83	85	87	78	69	63	57	49	44	40	37	29	27	36	38	45	47	51	58	65	56.1	87.1
29-Aug	71	76	84	88	90	88	88	83	81	67	59	52	48	41	40	45	43	29	32	55	66	76	81	82	65.2	89.7
30-Aug	84	87	87	84	88	90	85	80	72	61	52	42	31	29	27	26	27	28	32	40	48	52	52	66	57.0	89.6
31-Aug	74	73	74	81	82	79	77	72	64	54	46	40	33	30	27	28	28	30	33	39	46	51	55	62	53.3	81.8
		71.1	74.0	76.7	78.2	80.0	81.0	79.2	73.6	67.7	59.9	54.3	49.1	45.4	42.1	39.8	39.5	39.1	40.5	43.6	49.5	55.5	60.2	64.0	67.6	Diurnal Average
		87.8	88.9	89.6	90.5	90.7	91.6	91.5	92.1	88.7	85.7	83.8	78.2	77.8	71.5	75.6	74.8	71.3	71.1	82.4	88.9	87.9	86.3	85.6	85.1	Diurnal Maximum

# Hourly Averages for Relative Humidity at Henry Pirker August 2009

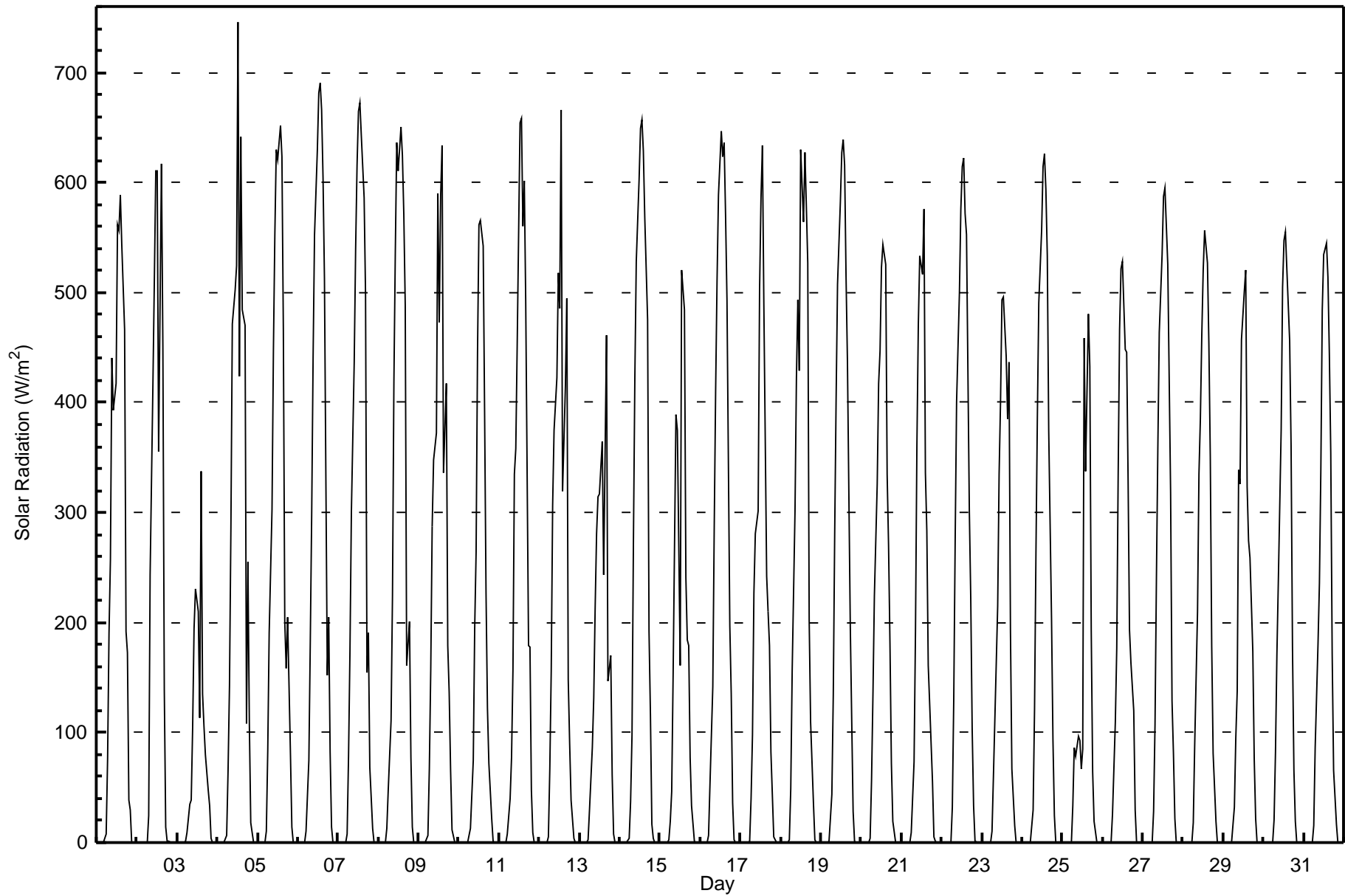


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - Solar Radiation (SR) - W/m<sup>2</sup>  
August 1, 2009 to September 1, 2009**

Maximum Value: 745.2 W/m <sup>2</sup> on Aug 4 13:00																								Hours in Service: 744		
Maximum Daily Average: 241.5 W/m <sup>2</sup> on Aug 6																								Hours of Data: 744		
Minimum Value: 0 W/m <sup>2</sup> on Aug 1 01:00																								Hours of Missing Data: 0		
Maximum Diurnal Average: 552.7 W/m <sup>2</sup> at hour 14																								Hours of Calibration: 0		
Monthly Average: 180.97 W/m <sup>2</sup>																								Percent Operational Time: 100.0		
Minimum Daily Average: 69.9 W/m <sup>2</sup> on Aug 3																										
Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 1																										
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 66.2 Q <sub>3</sub> = 358.1 P <sub>90</sub> = 551.9 P <sub>99</sub> = 664.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	7	76	191	258	441	393	418	561	556	589	543	466	191	173	39	30	0	0	0	205.5	589.1
2-Aug	0	0	0	0	0	0	0	25	243	418	512	611	610	355	618	450	139	14	2	1	0	0	0	0	166.7	617.5
3-Aug	0	0	0	0	0	1	9	34	38	104	195	230	209	113	337	135	106	80	48	34	4	0	0	0	69.9	337.3
4-Aug	0	0	0	0	0	6	66	143	287	472	503	525	745	424	642	485	470	109	255	110	19	0	0	0	219.2	745.2
5-Aug	0	0	0	0	0	10	84	191	303	449	553	630	621	652	624	466	201	158	205	81	15	0	0	0	218.4	651.6
6-Aug	0	0	0	0	0	10	74	182	299	442	552	630	682	690	665	604	513	152	205	82	14	0	0	0	241.5	690.0
7-Aug	0	0	0	0	0	8	79	174	301	437	539	615	665	672	643	585	498	155	190	68	13	0	0	0	235.1	671.8
8-Aug	0	0	0	0	0	13	48	111	224	418	537	637	611	650	625	571	488	161	201	77	15	0	0	0	224.5	650.3
9-Aug	0	0	0	0	0	7	67	157	287	348	372	590	473	589	634	336	418	178	137	66	11	0	0	0	194.6	633.8
10-Aug	0	0	0	0	0	6	12	75	195	264	446	562	565	542	390	226	122	72	22	2	1	0	0	0	145.9	564.9
11-Aug	0	0	0	0	0	8	39	78	157	334	359	454	655	658	560	601	492	179	178	48	9	0	0	0	200.4	658.5
12-Aug	0	0	0	0	0	5	66	156	307	375	423	518	486	666	320	415	494	149	90	38	3	0	0	0	188.0	666.4
13-Aug	0	0	0	0	0	3	30	86	132	214	280	314	317	364	243	353	461	147	171	62	7	0	0	0	132.7	461.4
14-Aug	0	0	0	0	0	4	37	98	275	422	529	603	649	657	629	568	476	192	116	17	4	0	0	0	219.8	657.1
15-Aug	0	0	0	0	0	2	20	47	152	389	375	269	160	520	484	241	184	179	78	33	2	0	0	0	130.6	519.9
16-Aug	0	0	0	0	0	7	52	142	286	411	511	588	647	624	637	571	494	197	135	36	2	0	0	0	222.5	647.0
17-Aug	0	0	0	0	0	1	40	98	227	281	301	502	586	634	490	242	210	179	82	44	5	0	0	0	163.4	633.6
18-Aug	0	0	0	0	0	2	49	156	301	422	493	429	630	564	627	578	526	202	109	36	3	0	0	0	213.7	630.3
19-Aug	0	0	0	0	0	1	44	134	281	404	508	582	627	639	615	516	437	197	112	28	1	0	0	0	213.6	639.1
20-Aug	0	0	0	0	0	4	57	135	224	326	417	447	523	544	525	335	270	180	72	20	0	0	0	0	170.0	544.2
21-Aug	0	0	0	0	0	0	10	73	192	361	470	533	516	576	336	283	161	127	55	5	1	0	0	0	154.0	575.9
22-Aug	0	0	0	0	0	0	33	130	274	400	500	576	615	623	572	552	302	221	103	34	1	0	0	0	205.6	622.7
23-Aug	0	0	0	0	0	0	10	61	164	215	335	401	494	496	441	385	437	193	67	15	0	0	0	0	154.7	495.7
24-Aug	0	0	0	0	0	0	30	121	265	388	491	557	615	626	594	533	375	202	93	25	0	0	0	0	204.8	626.5
25-Aug	0	0	0	0	0	0	33	87	78	97	93	67	86	458	338	480	433	193	64	20	0	0	0	0	105.2	480.2
26-Aug	0	0	0	0	0	0	25	109	176	334	466	522	528	449	446	331	193	163	120	30	0	0	0	0	162.1	527.8
27-Aug	0	0	0	0	0	0	28	107	241	359	464	535	587	595	560	526	319	128	81	22	0	0	0	0	189.6	594.9
28-Aug	0	0	0	0	0	0	17	89	210	335	385	461	521	556	527	453	350	179	81	19	0	0	0	0	174.3	556.1
29-Aug	0	0	0	0	0	0	33	96	137	338	326	457	501	520	323	274	259	174	76	22	0	0	0	0	147.4	520.1
30-Aug	0	0	0	0	0	0	21	82	171	237	375	505	548	555	522	456	360	177	66	19	0	0	0	0	170.6	554.7
31-Aug	0	0	0	0	0	0	15	87	181	236	339	484	535	545	514	445	354	172	66	16	0	0	0	0	166.2	544.8
0.0 0.0 0.0 0.0 0.0 3.2 38.7 109.3 217.6 342.0 414.8 488.2 534.3 552.7 523.3 442.0 358.5 163.0 112.9 37.7 5.1 0.0 0.0 0.0																								Diurnal Average		
0.0 0.0 0.0 0.0 0.0 12.6 83.9 190.9 306.6 472.0 553.2 636.7 745.2 690.0 665.4 603.8 526.3 221.1 255.2 109.9 29.8 0.0 0.0 0.0																								Diurnal Maximum		

# Hourly Averages for Solar Radiation at Henry Pirker August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Henry Pirker  
 August 1, 2009 to September 1, 2009  
 WS (km/h), WD (deg)

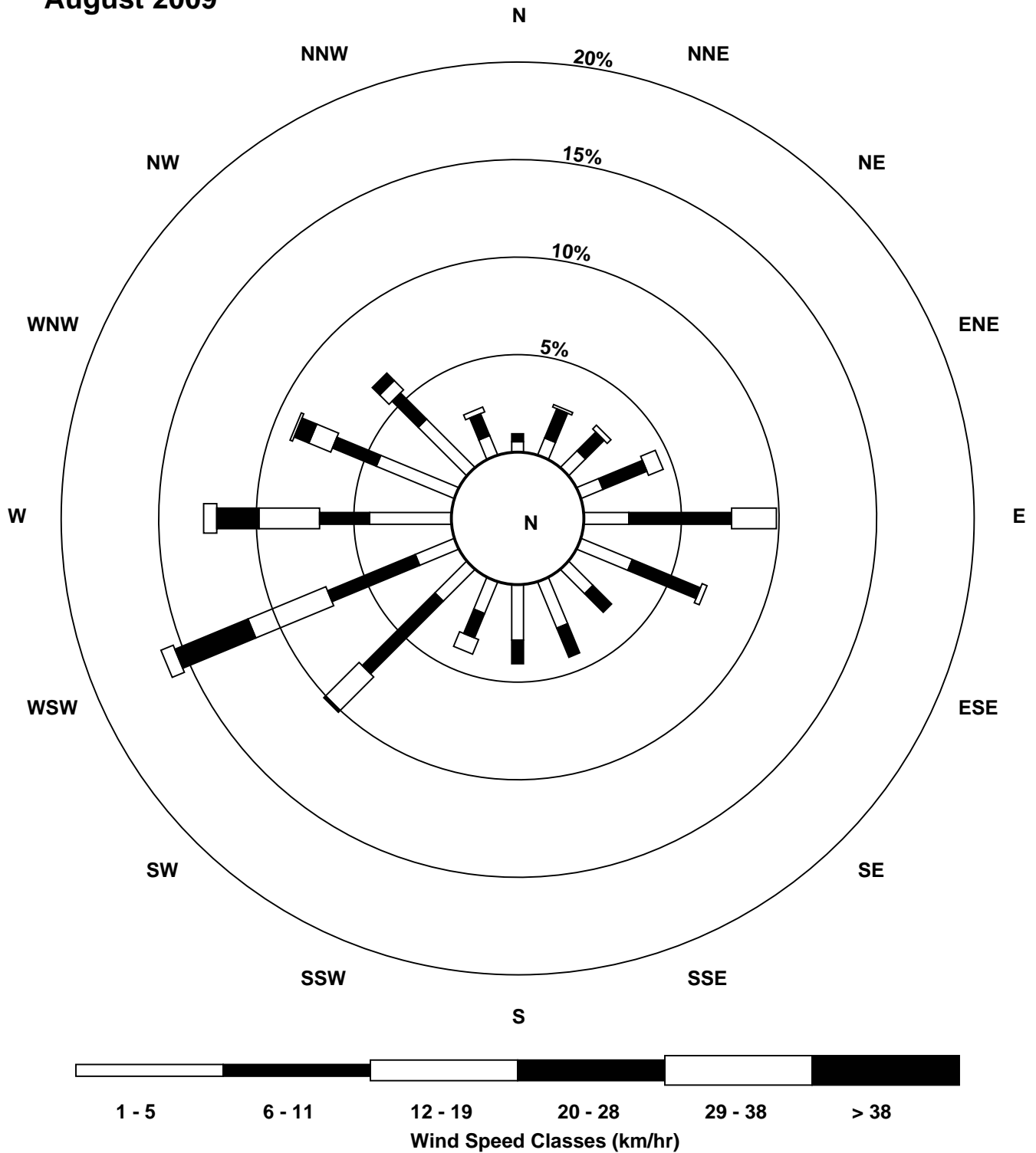
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	4	4	6	6	4	4	7	9	15	17	13	21	18	21	20	18	12	8	6	6	5	5	4	6.8	21.1
Dir	280	280	277	279	296	291	308	251	297	286	290	281	257	243	265	274	282	348	85	147	170	165	120	104	272.8	265.4
2 Spd	4	5	4	4	3	4	7	3	7	8	8	7	4	6	13	16	15	11	9	11	12	10	6	5	4.4	16.1
Dir	154	158	154	272	325	192	323	44	172	190	345	59	104	26	48	54	63	48	32	43	75	73	106	91	63.6	53.7
3 Spd	7	7	8	9	9	9	8	9	8	12	14	13	13	10	14	11	9	7	11	10	9	6	5	5	7.0	13.7
Dir	63	83	78	83	77	84	73	74	59	79	75	72	73	30	30	15	19	15	339	333	336	320	314	323	44.8	29.6
4 Spd	6	3	4	4	4	4	7	6	7	9	9	9	8	10	9	9	8	7	5	7	5	3	1	2	5.0	10.2
Dir	320	307	309	348	311	332	23	50	38	36	36	31	51	12	359	7	26	14	31	73	104	70	355	269	20.0	11.7
5 Spd	4	4	4	4	3	1	2	2	7	8	9	12	8	7	8	9	7	10	12	9	6	7	7	8	4.7	11.7
Dir	305	306	310	298	287	320	321	69	105	108	105	93	91	102	93	87	128	111	104	127	117	115	108	105	100.9	104.0
6 Spd	8	5	4	4	1	3	4	5	4	4	5	5	5	5	6	4	5	3	4	5	5	6	4	3	2.1	8.1
Dir	103	108	101	81	56	131	140	171	224	232	162	160	172	201	245	261	329	351	32	114	122	106	99	108	138.8	102.6
7 Spd	2	3	2	3	3	2	4	4	6	6	6	9	8	7	6	7	8	10	13	10	8	7	6	4	3.8	13.0
Dir	274	293	266	276	303	237	159	169	222	215	182	160	163	145	116	145	117	117	97	96	100	100	104	96	136.3	97.3
8 Spd	3	3	2	2	4	4	1	5	8	17	24	24	25	24	21	24	28	24	20	15	13	9	7	7	12.3	27.6
Dir	93	125	285	319	279	277	269	204	219	241	247	256	255	249	252	248	251	261	260	254	253	239	236	244	250.6	250.9
9 Spd	7	7	4	5	7	5	5	4	8	12	12	16	10	9	14	15	17	18	13	13	8	7	4	3	8.4	17.5
Dir	239	239	256	290	253	299	247	244	240	245	250	251	237	214	213	247	253	253	280	279	278	270	159	150	249.7	253.2
10 Spd	3	3	2	4	6	11	12	8	2	8	12	12	12	12	12	12	23	17	14	18	19	15	15	12	8.7	23.0
Dir	98	98	143	60	341	290	316	309	310	214	205	212	221	222	226	243	241	224	220	239	229	227	224	235	234.7	241.3
11 Spd	15	11	11	10	10	13	10	7	7	12	17	16	20	29	29	28	31	27	26	22	13	9	10	11	15.9	31.3
Dir	242	242	239	227	236	243	248	236	250	227	210	210	235	254	254	258	257	259	254	250	240	218	218	223	243.1	257.0
12 Spd	11	10	7	11	12	9	11	13	21	23	23	21	19	21	23	21	22	18	16	14	9	7	6	6	12.1	23.3
Dir	214	221	209	228	235	236	236	241	255	277	284	291	312	316	310	315	309	316	320	322	312	300	315	300	286.2	284.3
13 Spd	5	4	5	6	5	5	4	5	5	4	3	2	1	2	3	5	6	1	2	8	7	7	6	5	1.0	8.4
Dir	294	307	324	337	311	336	43	55	73	74	21	115	45	124	225	232	166	346	276	130	121	125	115	104	76.2	129.7
14 Spd	4	4	7	4	2	3	2	3	2	4	3	8	6	5	1	4	4	3	5	6	7	6	4	4	2.7	7.5
Dir	96	110	107	109	288	267	175	171	183	242	199	153	184	265	182	213	103	121	126	129	124	119	120	231	149.2	153.1
15 Spd	3	5	3	3	4	6	6	11	16	17	16	14	12	12	13	18	12	10	9	9	9	9	8	7	8.3	17.6
Dir	78	125	177	245	251	263	246	241	246	258	260	283	263	270	283	299	286	267	266	262	240	236	229	221	260.0	298.8
16 Spd	8	5	8	6	5	3	4	6	7	8	8	11	10	8	11	12	13	13	13	9	10	11	10	8	7.9	13.3
Dir	235	258	282	290	271	264	184	234	244	277	280	273	271	290	265	269	273	274	261	248	234	226	222	213	258.1	273.0
17 Spd	5	4	5	4	5	8	11	6	11	20	21	33	32	30	28	27	26	28	27	26	19	18	23	21	17.6	32.6
Dir	183	243	227	193	147	228	237	265	241	255	251	250	253	260	256	261	257	257	251	254	256	252	247	252	250.8	249.9
18 Spd	19	13	15	25	24	16	19	20	23	31	29	27	26	25	28	29	20	12	11	12	8	6	5	4	17.1	30.7
Dir	256	261	262	256	269	264	263	263	274	278	286	293	291	285	280	273	299	336	296	286	291	352	82	36	279.3	277.6
19 Spd	2	3	4	4	4	5	4	5	3	3	6	8	9	4	4	4	5	8	6	4	4	4	2	5	0.8	8.7
Dir	353	315	292	325	302	301	323	287	255	162	150	161	166	170	199	283	277	313	328	12	71	97	97	88	274.2	166.2
20 Spd	4	3	2	4	6	7	7	10	9	11	14	15	17	18	18	17	17	18	19	14	14	15	13	13	11.7	18.6
Dir	82	81	75	79	79	78	80	88	93	93	90	98	98	98	105	98	93	90	97	89	88	90	95	92	92.3	96.7
21 Spd	13	14	6	8	6	2	10	8	12	10	2	6	7	10	6	5	15	23	17	14	12	15	19	6	5.5	23.1
Dir	85	86	95	342	36	26	294	311	292	302	216	183	218	224	217	234	231	239	222	210	221	228	246	250	238.6	238.8
22 Spd	7	7	7	7	9	9	6	8	12	17	18	20	19	23	20	19	14	19	19	16	8	9	2	4	11.6	23.0
Dir	241	262	241	284	236	234	239	257	233	239	238	247	239	240	246	242	239	259	255	267	295	305	263	138	248.1	239.6

**Peace Airshed Zone Association  
Summary of Hourly Averages**

Henry Pirker  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	4	2	3	2	2	4	0	5	8	6	8	13	14	19	23	30	28	29	24	20	17	11	10	10	11.5	29.8	
Dir	302	299	318	340	215	172	252	270	252	232	202	223	238	248	251	263	262	259	254	249	246	237	230	227	249.1	263.0	
24 Spd	12	11	10	8	10	8	3	7	8	21	21	21	18	16	12	9	5	5	3	5	8	8	9	9	7.0	21.2	
Dir	229	228	235	234	234	231	244	248	250	259	267	269	259	264	264	277	267	233	201	121	105	101	104	96	245.3	269.1	
25 Spd	11	10	11	11	8	7	8	9	2	8	9	7	2	2	9	18	23	18	15	12	11	13	10	6	3.4	23.1	
Dir	90	91	85	95	89	75	92	98	212	284	276	250	152	82	258	265	262	251	261	267	254	273	261	223	251.3	262.2	
26 Spd	4	4	3	2	2	4	5	6	6	4	3	2	5	9	8	4	4	3	6	7	5	4	2	2	2.5	9.4	
Dir	188	221	326	324	210	167	287	312	311	256	251	166	120	157	164	216	223	174	163	185	173	174	195	220	200.4	156.5	
27 Spd	4	5	4	4	3	2	4	2	4	2	5	5	6	4	7	6	6	10	10	9	8	9	8	9	2.5	9.9	
Dir	287	298	295	295	262	289	298	261	219	237	139	137	116	140	136	93	97	93	86	88	77	78	80	84	97.9	86.0	
28 Spd	10	8	6	1	2	1	0	2	1	4	2	2	5	5	9	9	8	9	8	7	7	9	10	8	4.7	10.2	
Dir	90	104	93	127	288	6	224	256	184	187	180	182	116	124	99	105	92	87	98	77	73	80	80	72	96.4	89.5	
29 Spd	6	5	2	2	2	2	2	3	3	4	5	4	6	7	7	7	6	7	5	6	4	3	2	5	1.9	7.5	
Dir	77	104	313	355	211	278	301	168	166	235	259	226	231	277	291	187	210	304	285	152	142	163	293	308	240.1	291.2	
30 Spd	5	6	5	5	3	2	4	6	6	3	6	7	11	10	11	10	8	4	6	5	6	7	6	3	3.4	10.9	
Dir	289	315	310	291	168	254	197	172	201	181	220	200	239	202	210	247	204	170	139	120	116	123	113	301	204.8	239.3	
31 Spd	6	6	6	5	5	3	3	4	5	6	6	5	2	3	3	5	5	8	10	5	5	6	5	2	2.8	9.7	
Dir	327	325	320	300	273	263	267	275	261	265	286	269	342	354	19	51	28	35	17	38	39	44	60	329	341.0	17.3	
Spd	1.2	1.2	1.6	2.3	2.8	2.6	2.4	2.6	4.5	6.5	6.0	6.0	6.0	6.6	6.8	7.5	7.2	5.6	4.1	3.2	2.3	1.9	2.2	1.6	Diurnal Average		
Dir	223.5	232.3	261.2	281.2	264.9	257.9	269.7	248.4	247.6	252.9	252.4	243.6	241.8	251.1	256.0	265.7	262.4	269.7	259.7	242.1	213.8	192.5	188.2	196.3	Diurnal Maximum		
Spd	18.7	13.7	14.7	25.2	24.4	15.9	19.0	20.5	22.8	30.7	29.0	32.6	32.5	30.3	29.4	29.8	31.3	29.3	26.8	25.8	19.0	18.0	23.1	21.0	Diurnal Maximum		
Dir	256.3	85.9	262.3	256.0	269.0	264.3	263.4	262.8	274.3	277.6	285.7	249.9	253.2	259.9	254.1	263.0	257.0	259.2	250.5	254.4	228.5	251.5	247.1	251.8	Diurnal Maximum		
Maximum Speed Value: 33 km/h on Aug 17 12:00																		Minimum Speed Value: 0 km/h on Aug 23 07:00						Hours in Service:		744	
Maximum Daily Speed Average: 17.6 km/h on Aug 18																		Minimum Daily Speed Average: 0.8 km/h on Aug 14						Hours of Data:		744	
Maximum Diurnal Speed Average: 7.5 km/h at hour 16																		Minimum Diurnal Speed Average: 1.2 km/h at hour 1						Hours of Missing Data:		0	
Monthly Average Velocity: 3.74 km/h 251.08 deg																		Speed Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 4.4 Median = 7.3 Q <sub>3</sub> = 11.7 P <sub>90</sub> = 18.8 P <sub>99</sub> = 28.9						Percent Operational Time:		100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																											
Percentage Frequency Distribution																											
Speed Range (km/h)																											
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	1.75	1.61	0.27	0.00	0.00	0.00	3.63																				
NorthEast	1.48	2.96	0.67	0.00	0.00	0.00	5.11																				
East	4.17	9.41	3.63	0.00	0.00	0.00	17.20																				
SouthEast	2.82	4.70	0.00	0.00	0.00	0.00	7.53																				
South	4.84	3.63	0.00	0.00	0.00	0.00	8.47																				
SouthWest	3.76	8.87	6.59	1.08	0.00	0.00	20.30																				
West	6.59	6.18	5.65	5.38	2.15	0.00	25.94																				
NorthWest	5.78	4.30	0.94	0.81	0.00	0.00	11.83																				
Total	31.18	41.67	17.74	7.26	2.15	0.00	100.00																				

# Wind Rose for WS at Henry Pirker August 2009





**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Henry Pirker - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 33 km/h on Aug 17 13:00	Maximum Daily Speed Average: 19.0 km/h on Aug 18	Hours in Service: 744
Minimum Speed: 2 km/h on Aug 6 05:00	Minimum Daily Speed Average: 5.2 km/h on Aug 29	Hours of Data: 744
Maximum Diurnal Speed Average: 14.3 km/h at hour 17	Minimum Diurnal Speed Average: 6.0 km/h at hour 3	Hours of Missing Data: 0
Monthly Average Speed: 9.70 km/h	Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 5.2 Median = 7.8 Q <sub>3</sub> = 12.1 P <sub>90</sub> = 19.3 P <sub>99</sub> = 29.7	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	5	4	7	7	4	4	7	10	15	17	16	21	19	22	21	19	13	10	6	6	6	5	4	10.5	22.0
2-Aug	4	5	4	5	6	6	8	5	7	8	9	8	5	6	13	16	15	11	9	11	12	10	7	5	8.4	16.4
3-Aug	7	7	8	9	9	9	8	10	8	12	14	13	13	11	14	12	10	8	11	10	9	6	5	5	9.5	14.2
4-Aug	6	3	4	5	4	5	7	6	8	9	9	9	10	11	10	10	9	8	7	7	5	3	2	3	6.8	11.0
5-Aug	4	4	4	4	4	3	3	4	7	9	9	12	9	8	9	10	8	12	12	9	6	7	7	8	7.3	12.2
6-Aug	8	5	4	4	2	3	4	5	5	5	6	7	7	7	8	6	7	5	5	6	5	6	4	3	5.3	8.2
7-Aug	3	4	3	3	4	3	4	4	7	6	7	10	9	8	8	8	9	11	13	10	8	7	6	4	6.6	13.2
8-Aug	4	4	4	3	4	4	2	5	8	17	24	25	26	25	22	24	28	25	20	15	13	9	7	7	13.5	28.0
9-Aug	7	7	5	6	7	5	5	5	9	12	13	17	11	10	15	15	17	18	14	13	8	7	5	4	9.8	17.9
10-Aug	3	3	4	4	8	12	12	8	4	8	12	13	13	14	13	12	24	18	14	18	19	16	15	12	11.7	23.8
11-Aug	15	12	11	10	10	14	10	8	8	12	17	17	21	30	30	29	32	27	27	22	14	9	10	12	16.9	31.7
12-Aug	11	10	7	11	12	9	11	13	21	23	23	22	19	22	23	21	22	18	17	14	9	7	6	6	14.9	23.5
13-Aug	6	5	5	6	5	5	5	6	6	5	5	5	4	5	6	6	7	5	5	9	7	7	6	5	5.7	8.9
14-Aug	4	4	7	4	2	3	3	4	3	5	5	8	7	7	5	6	6	6	7	7	8	7	5	6	5.3	8.2
15-Aug	4	5	4	4	5	6	7	11	16	17	17	16	13	12	13	18	13	10	9	9	9	9	8	7	10.1	17.9
16-Aug	8	6	9	7	6	4	4	6	7	8	9	11	11	10	12	12	14	13	13	9	10	11	10	8	9.1	13.7
17-Aug	5	5	5	5	6	9	11	6	11	20	21	33	33	31	29	27	27	28	27	26	19	18	23	21	18.6	33.1
18-Aug	19	14	15	25	25	16	19	21	23	31	29	27	26	25	29	29	22	12	11	12	8	8	5	5	19.0	31.0
19-Aug	4	4	4	4	4	5	4	5	4	4	7	9	10	8	7	6	6	8	7	5	4	5	4	5	5.5	10.0
20-Aug	4	4	3	5	6	8	7	10	9	11	14	15	17	18	18	17	17	18	19	14	14	15	13	13	12.1	18.7
21-Aug	13	14	7	9	6	5	11	10	12	10	5	8	9	11	8	8	15	24	18	14	12	16	19	7	11.2	23.5
22-Aug	7	8	8	7	9	9	6	9	12	17	19	20	20	24	21	19	14	19	20	16	8	9	3	5	12.9	23.8
23-Aug	4	4	4	3	5	5	3	5	8	6	9	14	14	20	24	30	29	30	24	20	17	11	11	10	12.9	30.2
24-Aug	12	11	11	8	10	8	4	7	9	21	21	22	19	16	13	10	6	6	5	5	8	8	9	9	10.8	21.8
25-Aug	11	10	11	11	8	9	9	9	5	8	9	8	6	5	10	19	24	18	16	13	11	13	10	6	10.9	23.7
26-Aug	5	6	4	3	4	5	6	6	7	5	4	5	7	10	9	7	5	6	7	7	6	4	3	4	5.5	9.9
27-Aug	4	5	5	5	4	3	4	3	5	4	5	6	7	7	8	7	7	10	10	9	8	9	8	9	6.2	10.0
28-Aug	10	8	6	5	3	2	3	3	3	5	4	4	6	6	9	9	8	10	8	7	7	9	10	8	6.4	10.3
29-Aug	6	5	4	4	3	4	3	4	3	5	6	5	7	8	8	8	7	8	5	6	5	3	3	5	5.2	8.4
30-Aug	6	6	5	5	3	3	4	6	7	5	7	8	12	11	12	11	9	5	7	5	6	7	6	6	6.8	11.8
31-Aug	6	6	6	5	5	4	3	5	5	6	7	6	5	5	6	6	7	9	10	6	5	6	5	3	5.6	10.0

7.0	6.4	6.0	6.3	6.2	6.1	6.2	7.0	8.3	10.7	11.7	12.8	12.8	13.2	14.0	14.2	14.3	13.5	12.4	11.0	9.3	8.7	7.8	6.9	Diurnal Average	
18.8	13.7	14.8	25.3	24.6	16.0	19.1	20.6	23.0	31.0	29.2	32.8	33.1	30.7	29.9	30.2	31.7	29.6	27.1	26.0	19.5	18.1	23.2	21.2	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Henry Pirker - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 95.3 deg on Aug 13 18:00																					Hours in Service:	744			
Minimum Value: 4.3 deg on Aug 9 21:00																					Hours of Data:	744			
Percentiles: P <sub>1</sub> = 5.0 P <sub>10</sub> = 7.8 Q <sub>1</sub> = 10.5 Median = 17.6 Q <sub>3</sub> = 33.3 P <sub>90</sub> = 57.5 P <sub>99</sub> = 85.5																					Hours of Missing Data:	0			
																					Hours of Calibration:	0			
																					Percent Operational Time:	100.0			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	36	17	16	14	16	36	17	24	23	7	11	31	16	24	17	8	16	30	37	23	6	12	28	13	36.6
2-Aug	23	8	12	43	78	66	48	82	12	25	55	31	56	26	19	12	11	13	22	18	11	12	32	34	81.9
3-Aug	16	14	14	10	9	13	13	9	15	9	8	11	12	21	14	12	16	17	12	8	9	10	13	10	21.5
4-Aug	8	14	12	20	25	24	19	20	23	20	24	23	37	23	39	33	28	27	44	14	13	14	66	35	65.8
5-Aug	24	20	16	10	18	84	36	85	24	23	23	19	33	43	31	23	34	34	12	18	14	11	11	5	84.5
6-Aug	5	14	17	15	46	50	24	9	38	30	47	48	51	50	45	48	64	67	42	42	12	12	15	16	67.4
7-Aug	43	29	36	39	35	45	11	26	17	27	29	23	31	40	50	36	32	30	11	7	6	5	5	22	50.2
8-Aug	46	57	57	40	23	23	60	23	18	16	8	10	11	14	17	11	9	9	9	6	6	10	12	11	59.5
9-Aug	15	11	47	40	12	22	15	26	18	15	16	17	28	30	20	23	16	12	9	8	4	16	9	29	47.2
10-Aug	24	34	65	24	32	23	8	13	93	15	13	15	22	29	23	18	18	10	10	14	11	10	8	8	92.7
11-Aug	10	10	12	9	14	7	8	18	37	12	10	11	21	11	12	10	9	8	8	9	8	10	10	8	37.2
12-Aug	7	6	18	8	8	9	9	9	9	11	6	13	9	12	10	8	11	8	8	8	7	8	9	10	17.6
13-Aug	10	22	10	10	11	25	29	23	23	40	58	76	89	86	65	31	41	95	80	19	12	9	11	16	95.3
14-Aug	15	13	7	34	33	54	62	38	56	28	65	28	50	42	90	63	66	65	38	21	12	12	31	46	90.4
15-Aug	43	22	49	42	21	23	27	9	11	13	18	25	13	12	17	11	14	10	18	10	10	10	9	8	49.0
16-Aug	9	25	28	25	14	34	21	19	11	21	30	19	24	39	31	20	14	12	16	18	8	7	8	12	39.3
17-Aug	22	34	21	29	19	44	11	38	12	9	12	8	11	9	10	8	10	9	7	7	7	7	5	6	44.4
18-Aug	7	10	7	5	7	7	7	6	9	8	8	9	10	8	8	8	30	14	15	5	7	42	24	30	41.8
19-Aug	58	35	23	13	13	17	16	15	26	52	35	33	35	62	64	62	55	29	23	32	16	15	75	10	75.4
20-Aug	21	51	84	15	13	10	10	9	14	10	11	10	10	11	10	10	9	9	7	7	6	5	6	5	83.8
21-Aug	6	5	54	28	21	65	23	35	15	23	76	39	35	25	47	70	12	11	14	13	16	11	6	26	75.8
22-Aug	23	16	29	14	12	13	16	23	11	10	14	13	17	14	18	15	17	13	11	11	10	9	69	27	68.6
23-Aug	35	86	62	60	62	33	94	26	14	28	21	16	18	12	12	9	10	8	8	7	10	8	10	8	93.6
24-Aug	8	7	8	12	9	20	48	19	22	13	11	14	17	20	23	28	52	33	59	29	7	6	6	8	58.8
25-Aug	6	14	10	9	20	44	10	9	77	19	12	30	80	70	40	21	13	11	12	13	18	11	21	34	80.0
26-Aug	45	55	63	55	63	49	27	15	31	23	45	75	54	19	28	59	39	68	12	16	12	20	59	66	75.1
27-Aug	11	10	20	17	25	53	20	41	36	56	36	41	46	75	32	48	37	15	7	5	8	5	7	5	74.7
28-Aug	6	8	14	84	62	74	82	59	67	35	63	62	40	40	22	19	17	14	12	7	6	5	6	7	84.1
29-Aug	9	36	69	63	41	69	74	69	32	24	26	39	31	26	27	39	32	14	11	21	22	38	59	26	74.2
30-Aug	13	9	11	41	33	53	39	18	38	61	34	30	23	25	24	23	33	41	18	16	10	6	6	75	75.4
31-Aug	10	10	13	12	19	65	44	16	19	20	29	44	71	75	65	38	57	22	15	15	26	15	16	61	74.6
58.1	85.5	83.8	84.1	78.2	84.4	93.6	84.5	92.7	61.2	75.8	76.3	89.3	85.6	90.4	70.1	65.7	95.3	79.6	42.2	25.9	41.8	75.4	75.4		

# PASZA

## Evergreen Park Station

### Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association  
Summary of Hourly Averages**

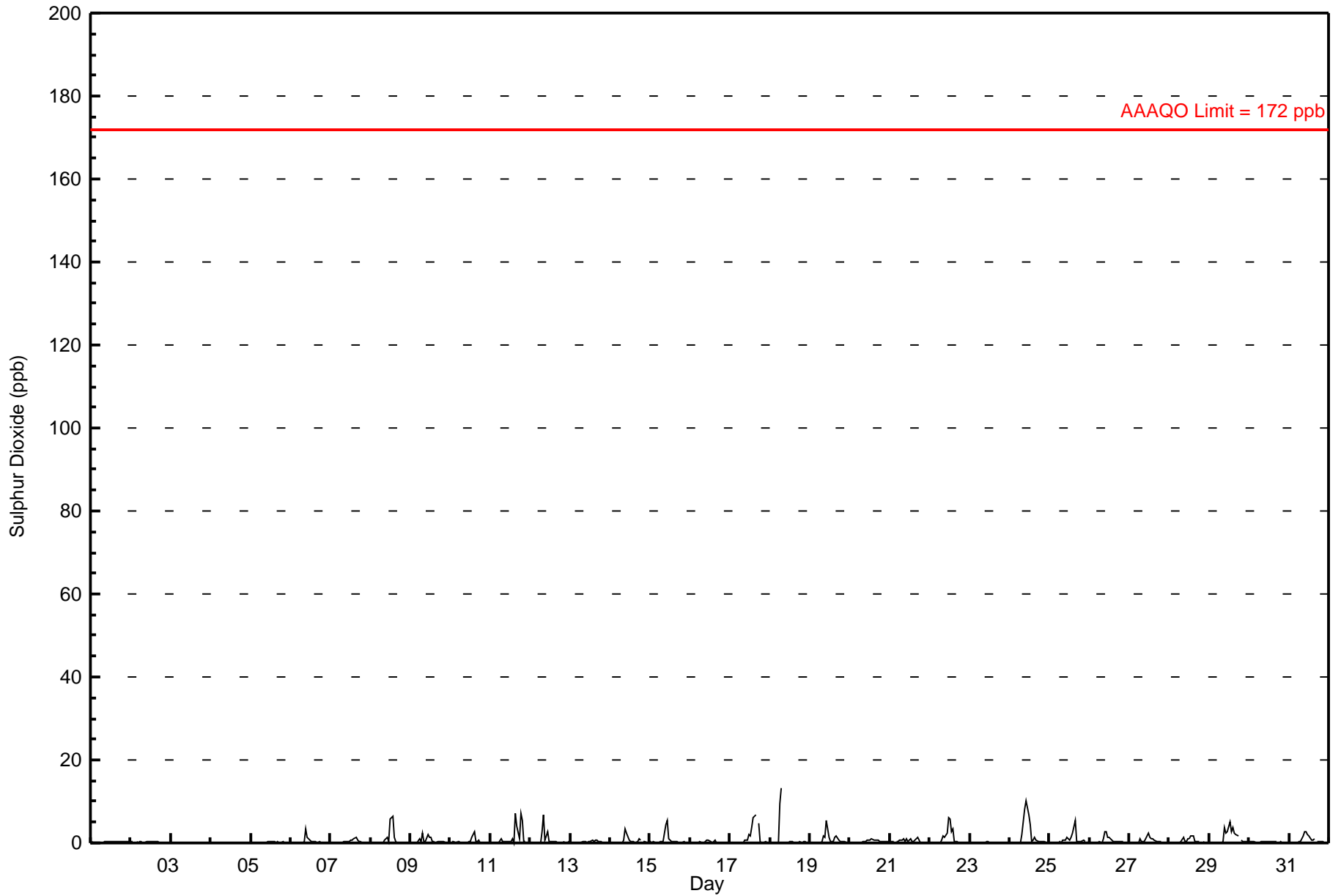
**Evergreen Park - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 13.3 ppb on Aug 18 08:00	Maximum Daily Average: 1.9 ppb on Aug 24
Minimum Value: 0 ppb on Aug 4 03:00	Hours of Data: 709
Maximum Diurnal Average: 1.6 ppb at hour 11	Hours of Missing Data: 35
Monthly Average: 0.58 ppb	Hours of Calibration: 35
Minimum Daily Average: 0.0 ppb on Aug 3	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.1 ppb at hour 4	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 1.4 P <sub>99</sub> = 6.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
2-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
6-Aug	0	0	0	0	A	0	0	0	0	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	3.5
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.3
8-Aug	0	0	A	0	0	0	0	0	1	1	1	0	6	6	1	0	0	0	0	0	0	0	0	0	0.8	6.3
9-Aug	0	A	0	0	0	1	0	2	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0.5	2.4
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	0	0	0	0	0.4	2.8
11-Aug	0	0	0	0	0	0	1	0	0	0	0	0	1	0	7	4	1	7	5	0	0	A	0	0	1.3	7.1
12-Aug	0	0	0	0	0	0	0	3	7	1	3	0	0	0	0	0	0	0	0	0	0	A	0	0	0.7	6.6
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	A	0	0	0	0.2	0.8
14-Aug	0	0	0	0	0	0	0	0	1	3	2	1	0	0	0	0	1	1	A	0	0	0	0	0	0.5	3.4
15-Aug	0	0	0	0	0	0	0	0	0	4	6	1	1	0	0	0	0	A	0	0	0	0	0	0	0.7	5.5
16-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	A	0	0	0	0	0	0	0	0.2	0.7
17-Aug	0	0	0	0	0	0	0	0	0	1	1	2	2	4	6	7	A	5	0	0	0	0	0	0	1.2	6.9
18-Aug	0	0	0	0	0	0	9	13	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	13.3
19-Aug	0	0	0	0	0	A	0	0	2	1	6	1	0	0	1	2	1	0	0	0	0	0	0	0	0.7	5.6
20-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	0.9
21-Aug	0	0	0	A	0	0	1	1	1	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0.4	1.3
22-Aug	0	0	A	0	0	0	0	1	2	1	2	6	6	3	3	0	0	0	0	0	0	0	0	0	1.1	6.0
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Aug	A	0	0	0	0	0	0	2	5	8	10	7	5	0	1	1	1	0	0	0	0	0	0	A	1.9	10.1
25-Aug	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	5	0	0	0	0	1	0	A	0	0.8	5.3
26-Aug	0	0	0	0	0	0	0	0	1	3	3	1	1	1	0	0	0	0	0	0	0	A	0	0	0.6	2.6
27-Aug	0	0	0	0	0	0	1	0	0	0	1	2	1	1	1	1	0	0	0	0	0	A	0	0	0.5	2.2
28-Aug	0	0	0	0	0	0	0	0	1	0	0	1	1	2	2	0	0	0	0	A	0	0	0	0	0.4	1.7
29-Aug	0	0	0	0	0	0	0	0	0	4	2	3	5	3	4	2	2	2	A	1	0	0	0	0	1.3	5.1
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
31-Aug	0	0	0	0	0	0	0	0	2	3	3	2	2	1	1	1	A	0	0	0	0	0	0	0	0.7	2.7
	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.8	0.9	1.3	1.6	1.1	1.2	1.0	1.0	1.1	0.5	0.5	0.4	0.4	0.2	0.1	0.1	0.1	Diurnal Average	
	0.4	0.3	0.3	0.2	0.2	1.1	9.4	13.3	6.6	8.3	10.1	6.6	5.9	6.3	6.2	7.1	4.0	4.8	7.1	5.4	0.6	0.4	0.4	0.4	Diurnal Maximum	

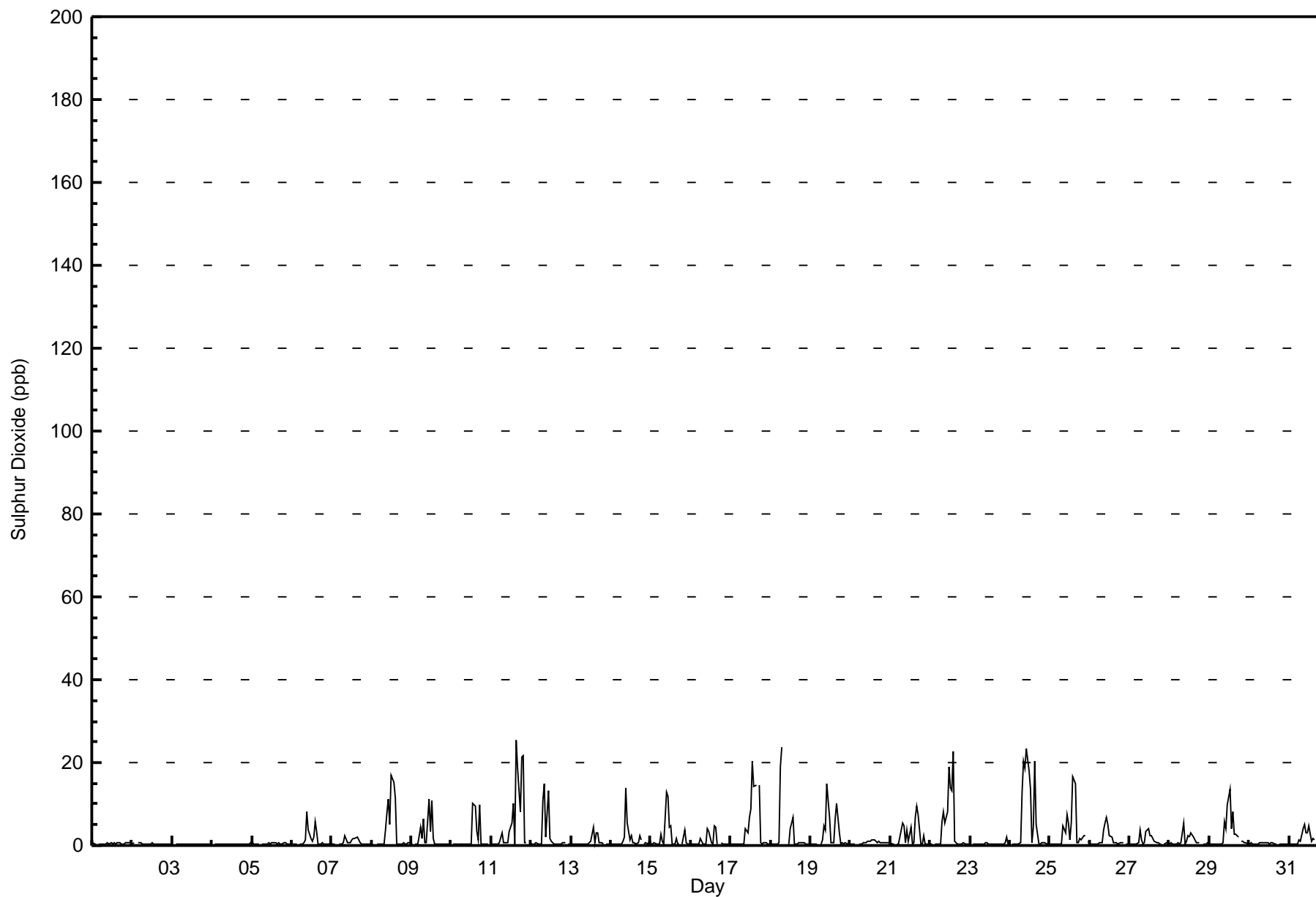
C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

# Hourly Averages for SO<sub>2</sub> at Evergreen Park August 2009

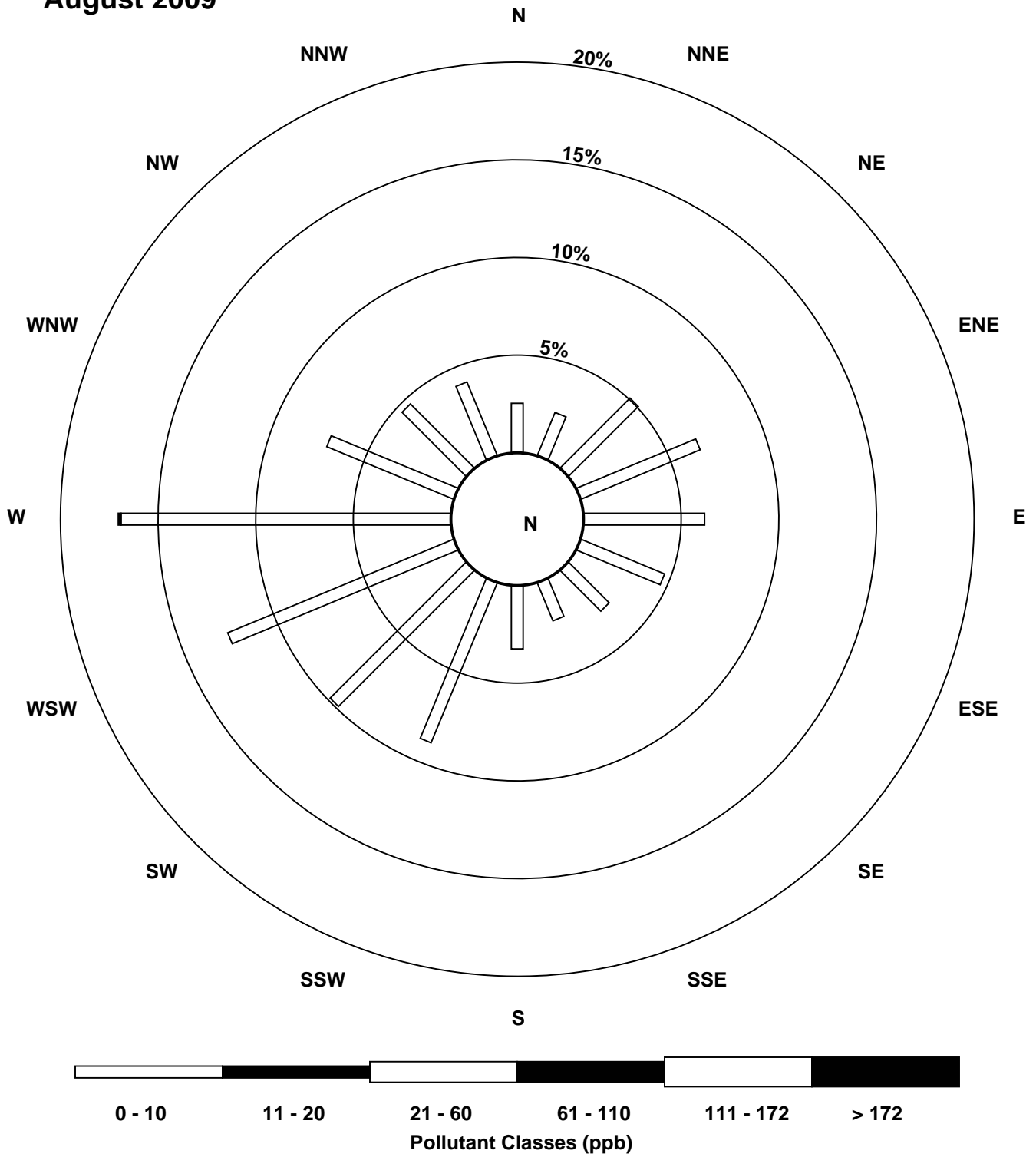




# Hourly Maximums for SO<sub>2</sub> at Evergreen Park August 2009



# Pollutant Rose for SO<sub>2</sub> at Evergreen Park August 2009





**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - Total Reduced Sulphur (TRS) - ppb  
August 1, 2009 to September 1, 2009**

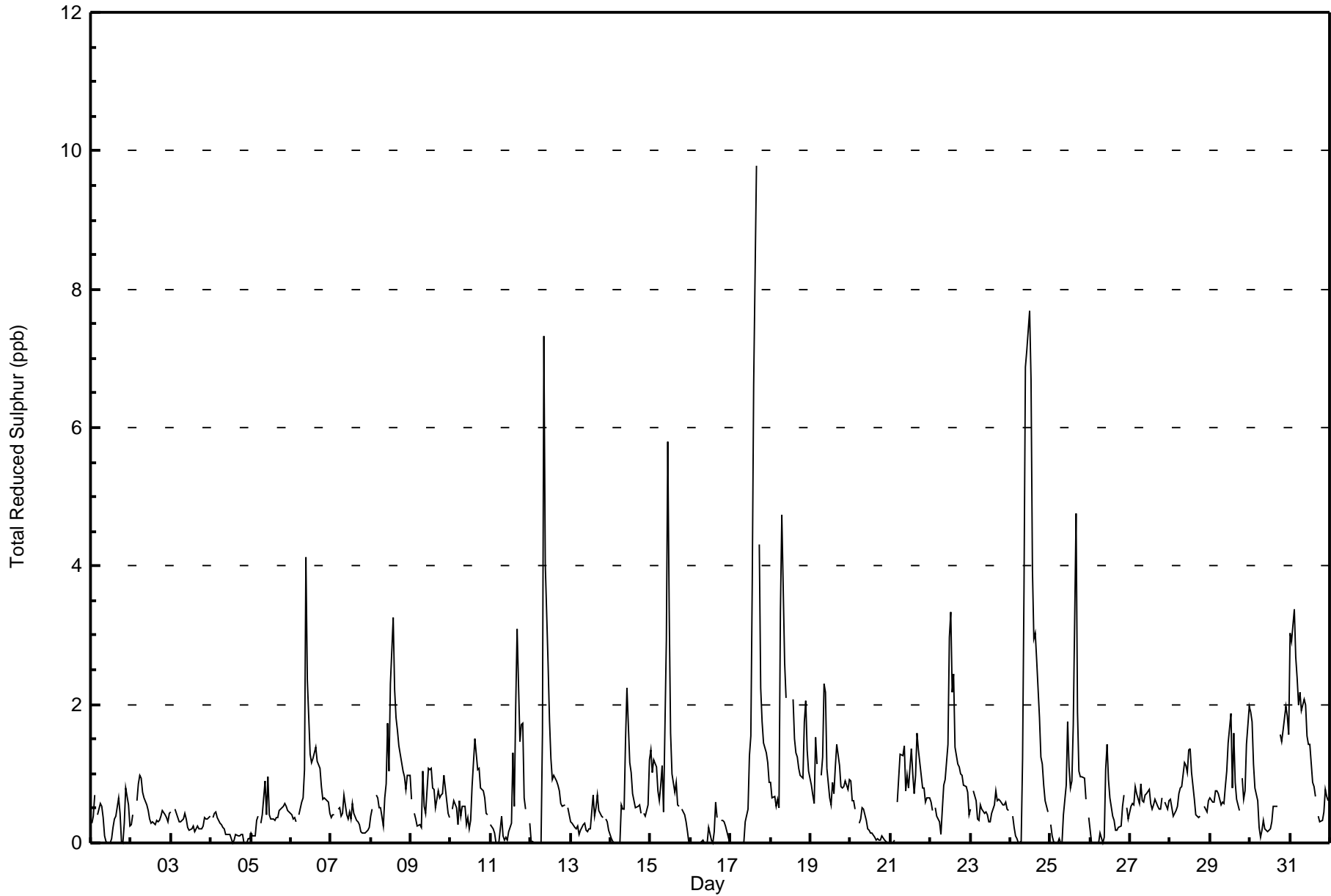
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 9.8 ppb on Aug 17 16:00	Maximum Daily Average: 2.4 ppb on Aug 24
Minimum Value: 0 ppb on Aug 1 11:00	Hours of Data: 709
Minimum Daily Average: 0.1 ppb on Aug 16	Hours of Missing Data: 35
Maximum Diurnal Average: 1.3 ppb at hour 11	Hours of Calibration: 35
Monthly Average: 0.78 ppb	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.3 Median = 0.5 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.6 P <sub>99</sub> = 6.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	1	A	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0.3	0.8
2-Aug	0	0	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0
3-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Aug	0	0	0	0	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0.4	1.0
6-Aug	0	0	0	0	A	0	1	1	1	4	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	4.1
7-Aug	0	0	0	A	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
8-Aug	0	0	A	1	1	1	1	0	1	1	2	1	2	3	2	2	2	1	1	1	1	1	1	1	1.1	3.3
9-Aug	1	A	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	1.1
10-Aug	A	0	1	0	0	1	0	1	1	0	0	0	0	1	2	1	1	1	1	1	1	0	0	A	0.6	1.5
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	1	2	2	1	0	A	0	0.6	3.1
12-Aug	0	0	0	0	0	0	0	2	7	4	3	2	1	1	1	1	1	1	1	1	1	A	1	0	1.1	7.3
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	A	0	0	0	0.3	0.7
14-Aug	0	0	0	0	0	0	1	0	0	1	2	1	1	1	1	1	1	1	0	A	0	0	1	1	0.6	2.2
15-Aug	1	1	1	1	1	1	1	1	0	3	6	3	2	1	1	1	1	1	A	0	0	0	0	0	1.2	5.8
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0.1	0.6
17-Aug	0	0	0	0	0	0	0	0	0	0	0	1	2	4	7	10	A	4	2	2	1	1	1	1	1.6	9.8
18-Aug	1	1	1	1	1	1	3	5	3	2	C	C	A	2	2	1	1	1	1	1	2	2	1	1	1.5	4.7
19-Aug	1	1	1	2	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.3
20-Aug	1	1	1	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
21-Aug	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0.8	1.6
22-Aug	1	0	A	1	0	0	0	0	1	1	1	3	3	2	2	1	1	1	1	1	1	1	1	0	1.1	3.3
23-Aug	0	A	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0.5	0.7
24-Aug	A	0	0	0	0	0	0	1	4	7	7	8	7	4	3	3	3	2	1	1	1	1	0	A	2.4	7.7
25-Aug	0	0	0	0	0	0	0	0	0	1	2	1	1	1	2	5	2	1	1	1	1	1	A	0	0.8	4.8
26-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	A	0	0	0.3	1.4
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	A	1	0	1	0.6	0.9
28-Aug	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	1	0	0	1	0.7	1.4
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	0	A	1	1	1	1	2	0.9	2.0
30-Aug	2	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	A	2	1	2	2	2	2	0.9	2.0
31-Aug	3	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1	A	0	0	0	0	0	1	1	1.5	3.4

0.6	0.5	0.5	0.5	0.5	0.4	0.6	0.7	1.0	1.2	1.3	1.1	1.0	1.0	1.0	1.2	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	Diurnal Average	
3.0	2.9	3.4	2.7	2.4	2.0	3.3	4.7	7.3	6.9	7.1	7.7	6.7	3.9	6.6	9.8	3.1	4.3	2.2	1.7	1.7	2.1	1.8	2.0	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb

# Hourly Averages for TRS at Evergreen Park August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

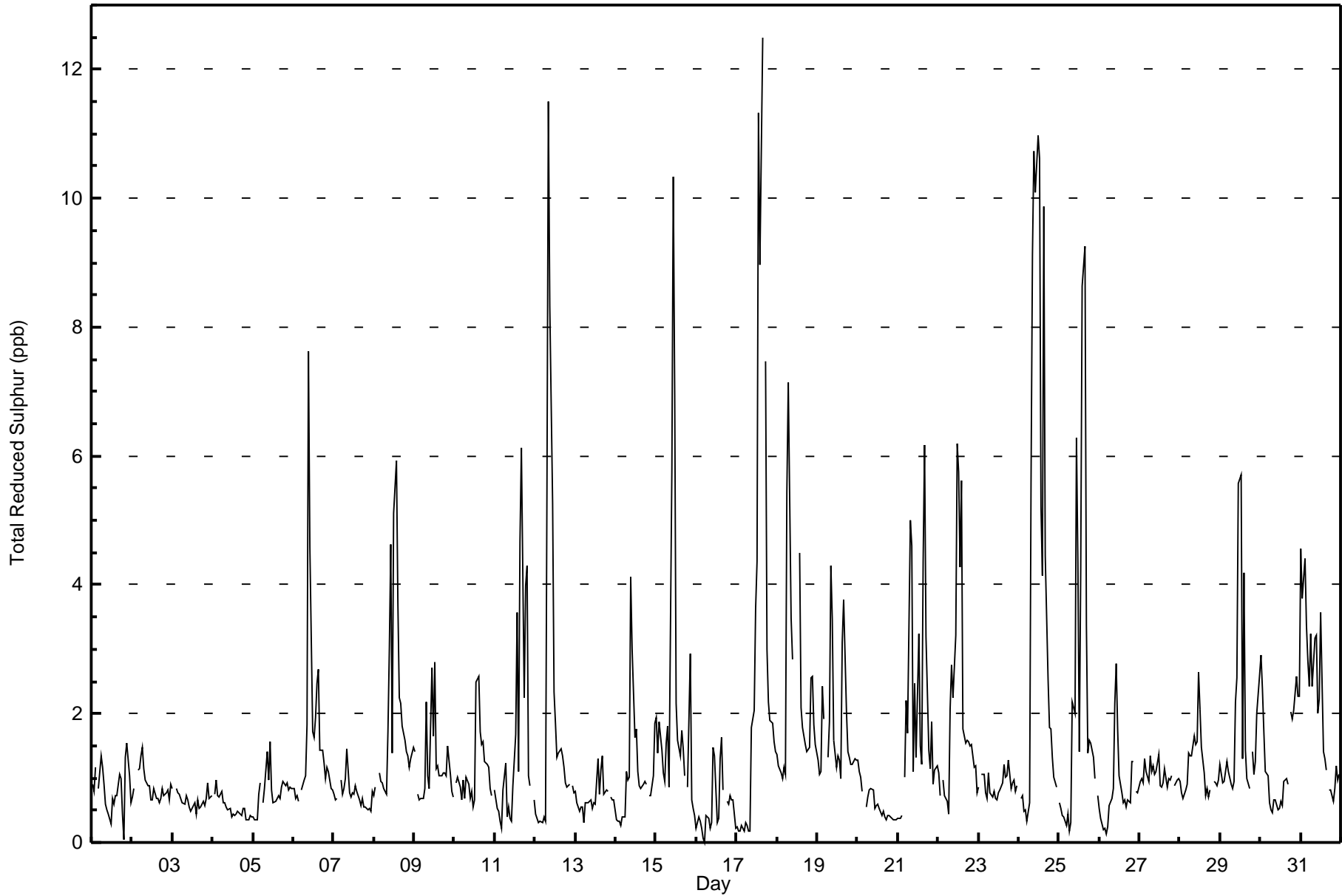
**Evergreen Park - Total Reduced Sulphur (TRS) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 12.5 ppb on Aug 17 16:00	Maximum Daily Average: 4.2 ppb on Aug 24	Hours in Service: 744
Minimum Value: 0 ppb on Aug 16 06:00	Minimum Daily Average: 0.5 ppb on Aug 4	Hours of Data: 709
Maximum Diurnal Average: 2.5 ppb at hour 11	Minimum Diurnal Average: 0.8 ppb at hour 5	Hours of Missing Data: 35
Monthly Average: 1.49 ppb	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.7 Median = 1.0 Q <sub>3</sub> = 1.5 P <sub>90</sub> = 3.1 P <sub>99</sub> = 10.2	Hours of Calibration: 35
		Percent Operational Time: 100.0

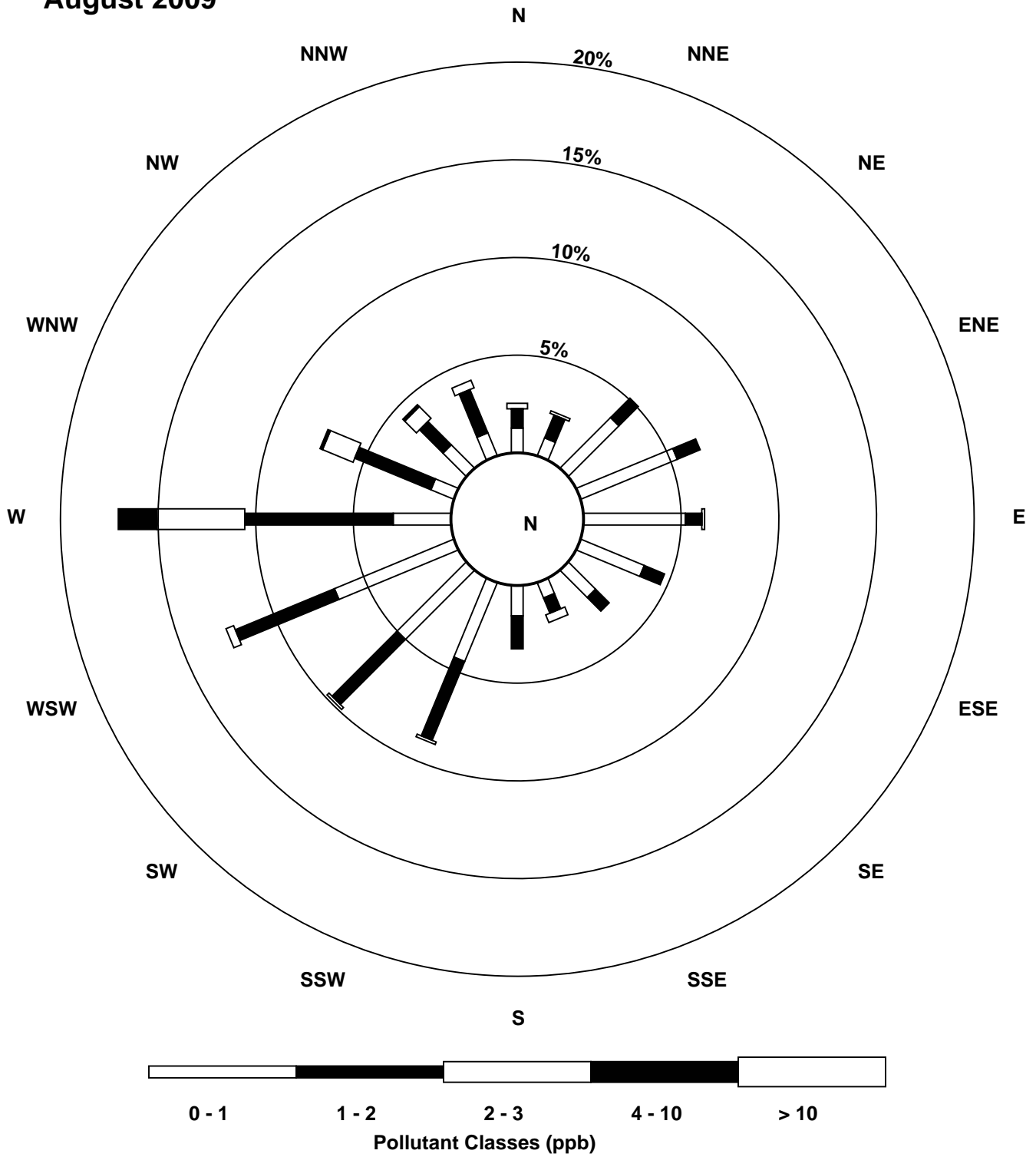
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	A	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	1	2	1	1	0.8	1.5
2-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
3-Aug	1	A	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0.7	0.9
4-Aug	A	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0.5	1.0
5-Aug	0	0	0	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
6-Aug	1	1	1	1	A	1	1	1	2	8	5	2	2	2	3	1	1	1	1	1	1	1	1	1	1.7	7.6
7-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.4
8-Aug	1	1	A	1	1	1	1	1	2	3	5	1	5	6	4	2	2	2	2	1	1	1	1	1	2.0	5.9
9-Aug	1	A	1	1	1	1	1	2	1	1	3	2	3	1	1	1	1	1	1	1	1	1	1	1	1.2	2.8
10-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1	1	1	1	1	A	1.1	2.6
11-Aug	1	1	0	0	0	1	1	0	1	0	0	1	2	4	1	5	6	2	4	4	1	1	A	1	1.6	6.1
12-Aug	0	0	0	0	0	0	0	5	11	8	5	2	2	1	1	1	1	1	1	1	1	A	1	1	2.1	11.5
13-Aug	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.4
14-Aug	0	0	0	0	0	0	1	1	1	4	3	2	2	1	1	1	1	1	1	A	1	1	1	2	1.1	4.1
15-Aug	2	1	2	1	1	1	2	2	1	6	10	7	2	2	1	2	1	1	A	1	3	1	1	0	2.2	10.3
16-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	2	1	A	1	1	1	1	1	0	0.6	1.6
17-Aug	0	0	0	0	0	0	0	0	0	2	2	4	4	11	9	13	A	7	3	2	2	2	2	1	2.9	12.5
18-Aug	1	1	1	1	1	1	5	7	3	3	C	C	A	5	2	2	2	2	1	1	3	3	2	2	2.3	7.1
19-Aug	1	1	1	2	2	A	1	2	4	3	2	1	1	1	1	3	4	2	1	1	1	1	1	1	1.8	4.3
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.3
21-Aug	0	0	0	A	1	2	2	5	5	1	2	1	3	2	1	4	6	3	1	1	2	1	1	1	2.1	6.2
22-Aug	1	1	A	1	1	1	0	2	3	2	3	6	6	4	6	2	2	2	2	1	2	1	1	1	2.1	6.2
23-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
24-Aug	A	1	1	0	1	0	1	6	9	11	10	11	11	5	4	10	4	3	2	2	1	1	1	A	4.2	11.0
25-Aug	1	1	0	0	0	0	0	0	2	2	6	4	1	4	9	9	3	1	2	2	1	1	A	1	2.3	9.3
26-Aug	1	0	0	0	0	0	1	1	1	2	3	2	1	1	1	1	1	1	1	1	1	A	1	1	0.8	2.8
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.4
28-Aug	1	1	1	1	1	1	1	1	2	2	2	3	2	1	1	1	1	1	1	A	1	1	1	1	1.2	2.6
29-Aug	1	1	1	1	1	1	1	1	1	2	3	6	6	1	4	1	1	1	A	1	1	1	2	3	1.8	5.7
30-Aug	3	2	2	1	1	1	1	0	1	1	0	1	1	1	1	1	1	A	2	2	2	3	2	2	1.3	2.9
31-Aug	5	4	4	3	3	2	3	2	3	3	2	2	4	1	1	1	A	1	1	1	1	1	1	1	2.2	4.6
	1.0	0.9	0.9	0.9	0.8	0.8	1.1	1.6	2.0	2.3	2.5	2.2	2.1	2.1	2.0	2.4	1.7	1.4	1.2	1.2	1.2	1.1	1.0	1.0	Diurnal Average	
	4.6	3.8	4.4	3.4	2.8	2.4	5.4	7.1	11.5	10.7	10.3	11.0	10.6	11.3	9.0	12.5	6.2	7.5	4.0	4.3	2.9	2.6	2.3	2.6	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for TRS at Evergreen Park August 2009



# Pollutant Rose for TRS at Evergreen Park August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

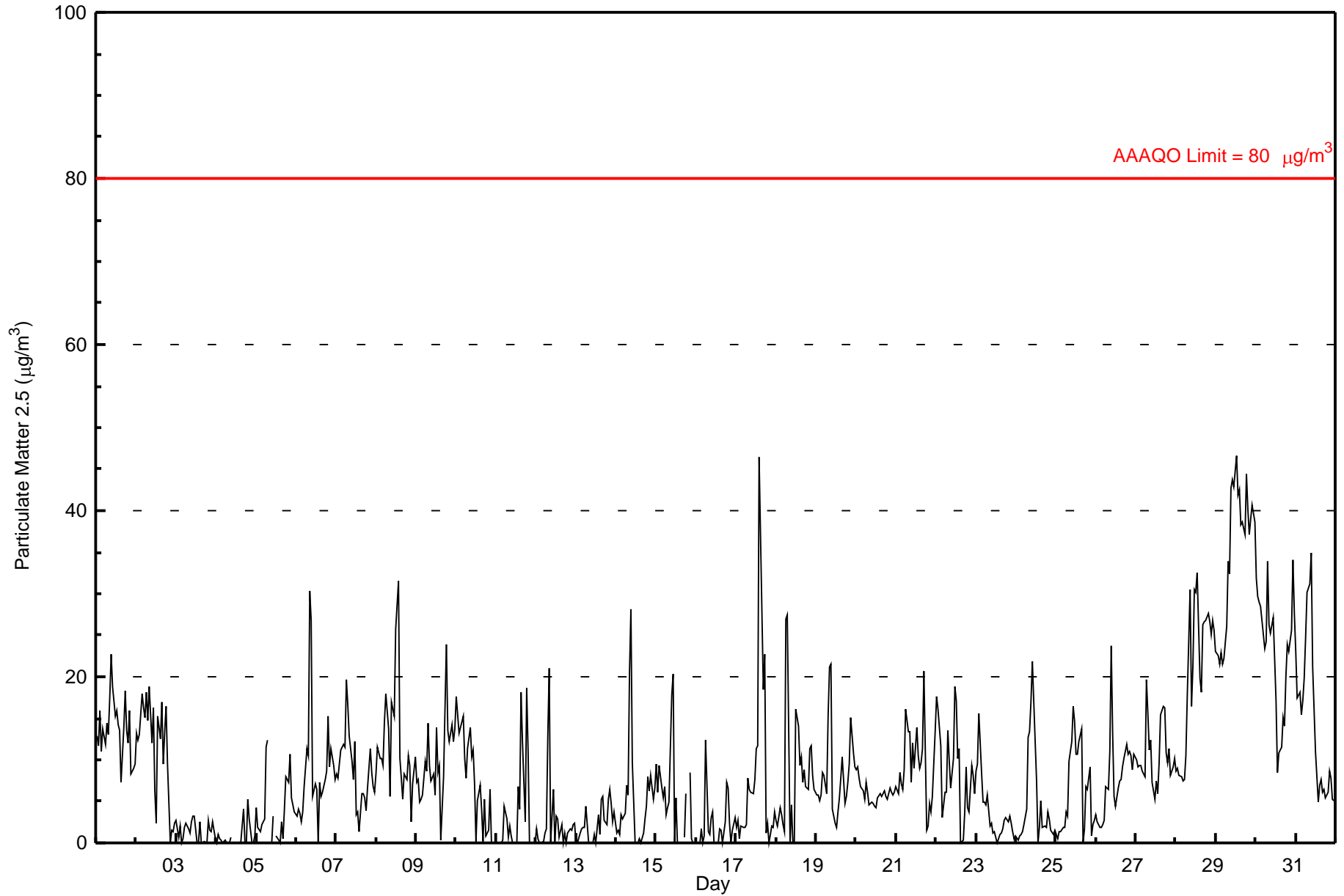
Number of Exceedances (AAQO): 1-hr: 0 24-hr: 1	Hours in Service: 744
Maximum Value: 46.7 µg/m <sup>3</sup> on Aug 29 13:00	Maximum Daily Average: 35.0 µg/m <sup>3</sup> on Aug 29
Minimum Value: 0 µg/m <sup>3</sup> on Aug 2 21:00	Hours of Data: 732
Maximum Diurnal Average: 12.8 µg/m <sup>3</sup> at hour 10	Hours of Missing Data: 12
Monthly Average: 8.99 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.8 µg/m <sup>3</sup> on Aug 4	Percent Operational Time: 98.4
Minimum Diurnal Average: 6.7 µg/m <sup>3</sup> at hour 5	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 2.2 Median = 6.7 Q <sub>3</sub> = 12.2 P <sub>90</sub> = 21.5 P <sub>99</sub> = 42.3	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	13	12	16	11	14	12	14	13	18	23	19	15	16	14	14	7	14	18	14	12	16	8	9	10	13.8	22.8	
2-Aug	13	12	13	18	16	15	18	15	19	12	16	6	2	15	13	17	10	13	17	10	0	1	1	2	11.5	18.8	
3-Aug	3	1	2	0	0	2	2	2	1	3	3	3	0	0	3	0	0	0	0	3	1	1	3	0	1.4	3.3	
4-Aug	0	1	1	0	0	0	0	BD	0	1	BD	BD	BD	0	0	0	4	0	0	5	3	0	0	1	0.8	5.2	
5-Aug	4	2	1	2	3	3	12	12	BD	0	3	BD	BD	1	0	0	3	1	4	8	7	11	5	5	4	4.1	12.4
6-Aug	3	4	4	3	4	7	11	10	30	27	6	7	6	0	7	6	6	8	9	15	9	11	9	8	8.7	30.4	
7-Aug	8	8	9	11	12	12	20	17	13	10	8	12	3	4	1	6	6	5	4	7	11	9	7	6	8.7	19.6	
8-Aug	8	11	10	10	9	15	18	14	6	17	16	15	26	31	10	8	5	8	8	10	9	3	7	10	11.9	31.5	
9-Aug	7	8	5	5	6	10	9	14	9	7	8	6	14	8	9	0	8	16	24	14	12	14	12	14	10.0	24.0	
10-Aug	18	15	13	15	15	10	8	11	14	10	11	7	0	5	7	4	0	5	1	2	6	0	0	0	7.4	17.7	
11-Aug	BD	0	0	0	0	4	3	1	2	1	0	0	0	7	4	18	12	3	19	11	0	0	0	0	3.7	18.7	
12-Aug	2	1	0	0	0	1	2	13	21	0	6	0	3	3	1	2	0	1	0	1	2	2	2	2	2.7	20.9	
13-Aug	0	0	1	2	2	2	4	0	0	0	0	1	0	3	1	5	6	3	2	5	6	5	3	4	2.3	6.5	
14-Aug	1	2	1	3	3	4	7	6	20	28	10	0	BD	0	1	0	1	3	4	8	6	8	5	7	5.6	28.2	
15-Aug	9	6	9	7	5	7	3	4	5	18	20	0	5	0	BD	7	BD	1	6	BD	8	1	0	0	5.8	20.4	
16-Aug	0	0	0	2	0	1	12	1	1	3	4	0	BD	0	2	1	0	2	7	7	2	0	2	3	2.2	12.4	
17-Aug	2	3	1	2	2	2	2	8	6	6	6	8	11	12	46	28	18	23	1	2	0	2	2	4	8.2	46.4	
18-Aug	3	2	4	3	2	1	27	27	0	5	0	0	16	14	9	10	7	9	7	6	11	12	8	6	8.0	27.5	
19-Aug	6	6	5	6	8	8	6	15	21	22	4	2	2	4	5	8	10	5	6	7	9	15	11	9	8.4	21.6	
20-Aug	9	9	8	7	6	5	7	6	5	5	5	4	4	5	6	6	6	6	6	5	7	6	6	6	6.0	9.1	
21-Aug	7	6	8	7	6	9	16	13	13	7	12	9	14	10	9	10	11	21	1	2	5	4	6	13	9.2	20.7	
22-Aug	18	16	14	12	3	6	6	14	10	7	10	19	17	10	11	0	0	4	9	4	4	9	8	6	9.0	18.7	
23-Aug	9	10	16	8	5	5	5	6	2	2	1	1	1	0	1	1	2	3	3	2	3	2	1	1	3.7	15.6	
24-Aug	1	0	1	1	1	2	4	13	13	17	22	12	7	0	2	5	2	2	2	4	3	2	1	2	5.0	21.9	
25-Aug	1	0	1	1	2	2	4	3	10	12	16	15	11	11	12	14	0	2	7	6	9	1	2	3	6.0	16.4	
26-Aug	3	3	2	2	2	3	7	6	11	24	13	6	4	7	7	8	9	10	12	11	11	11	9	11	7.9	23.7	
27-Aug	10	9	9	9	9	8	20	16	11	12	7	5	7	6	10	15	16	16	11	10	11	8	9	10	10.7	19.7	
28-Aug	9	9	8	8	7	8	10	18	31	16	21	31	30	33	20	18	26	27	27	28	27	25	27	26	20.3	32.5	
29-Aug	23	23	22	23	22	22	26	34	32	43	44	43	47	42	42	38	39	37	44	40	37	39	41	39	35.0	46.7	
30-Aug	32	30	29	28	25	23	24	34	26	25	27	22	17	9	11	12	15	14	20	24	23	26	34	28	23.2	34.1	
31-Aug	23	18	18	15	17	20	25	30	31	35	21	16	11	5	7	8	6	6	5	6	9	8	5	5	14.6	35.0	

8.1	7.3	7.5	7.2	6.7	7.4	10.7	12.6	12.7	12.8	11.4	9.2	9.9	8.3	9.1	8.5	8.1	8.9	9.1	9.2	8.8	7.7	7.5	7.7	Diurnal Average
31.8	29.7	29.0	28.4	25.0	23.4	27.0	34.0	32.4	42.7	43.7	42.9	46.7	41.8	46.4	38.2	38.6	37.1	44.5	40.2	37.1	39.0	40.7	38.7	Diurnal Maximum

BD - Baseline Drift  
 Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m<sup>3</sup>

# Hourly Averages for PM<sub>2.5</sub> at Evergreen Park August 2009



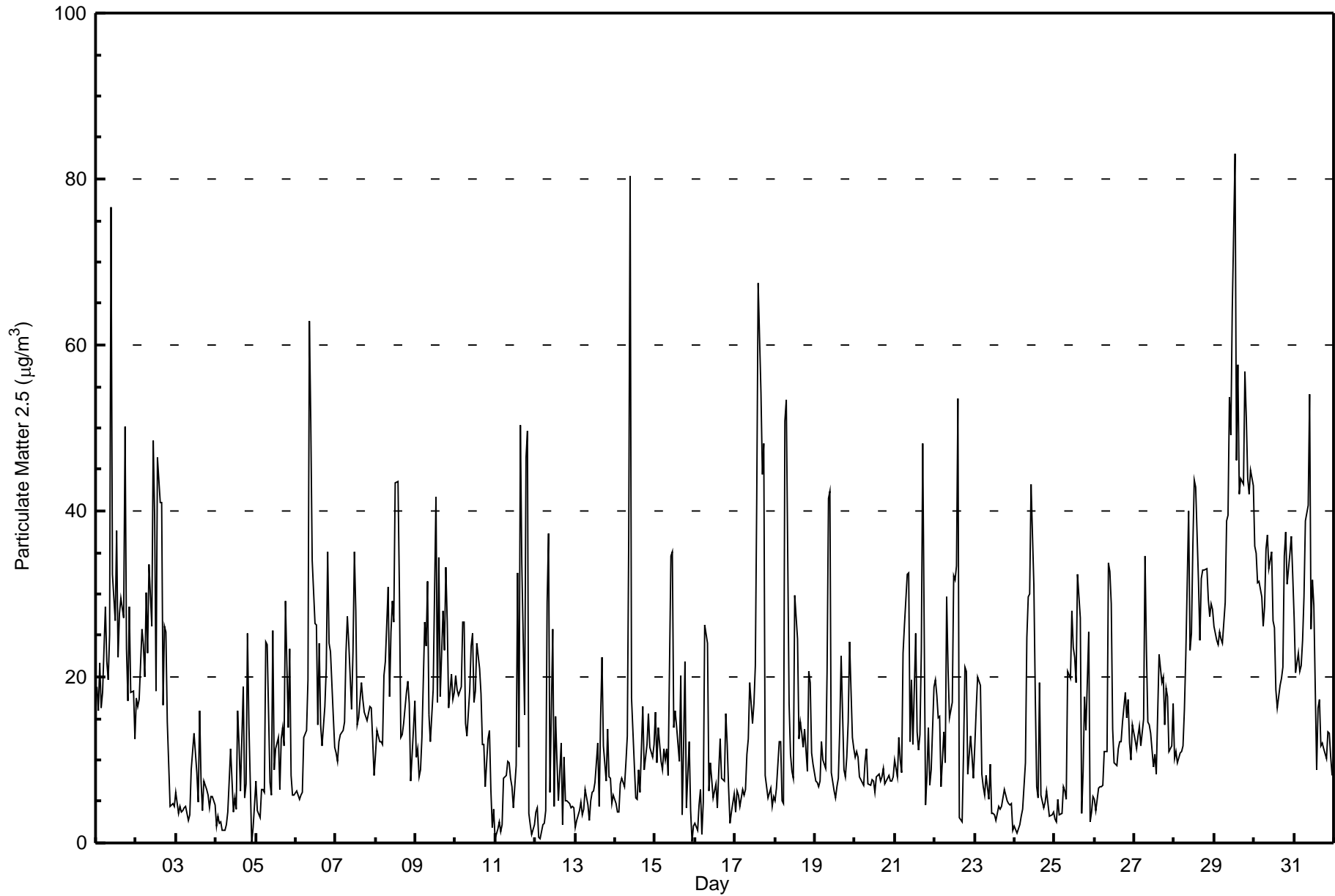
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

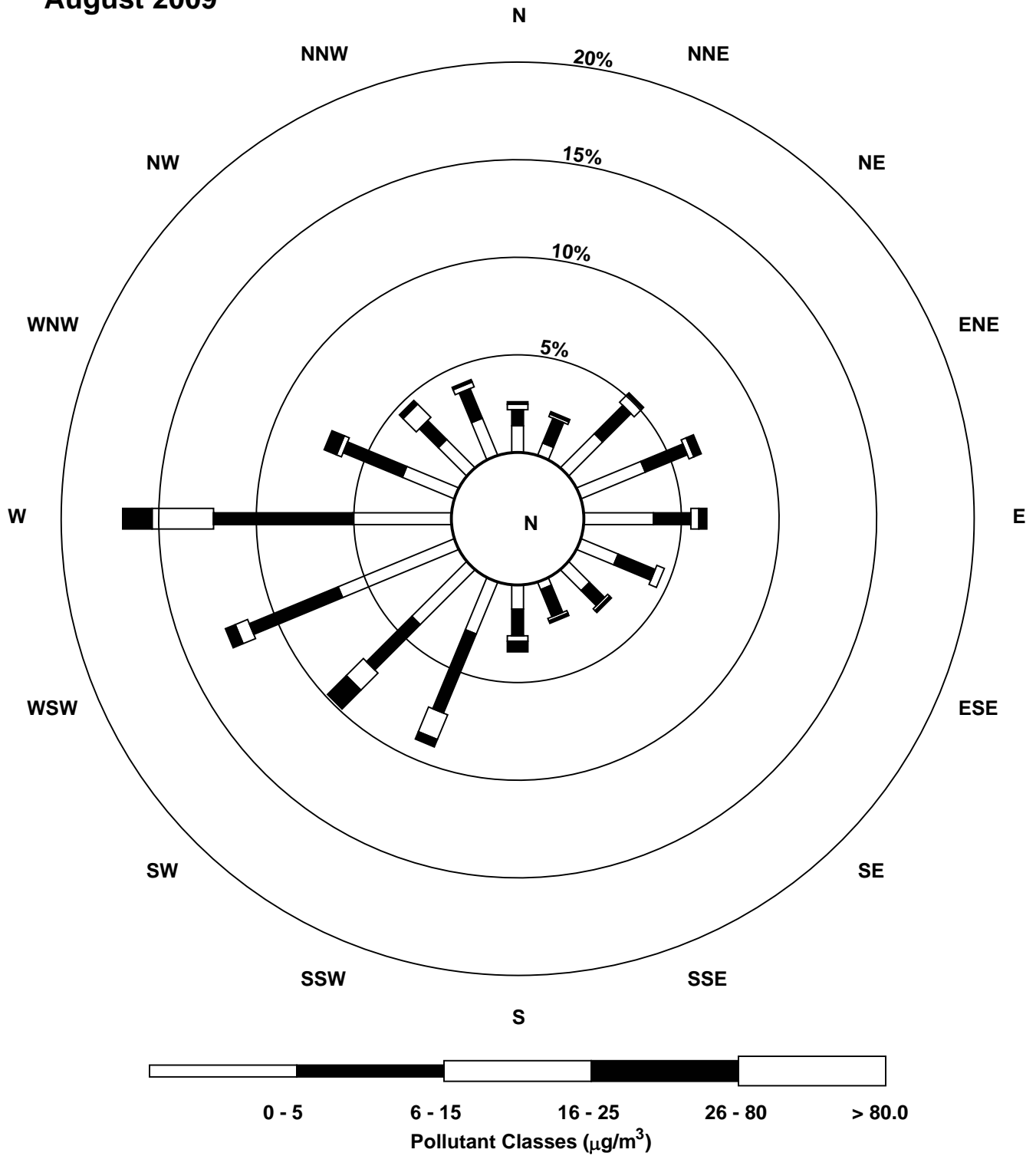
Maximum Value: 83.0 µg/m <sup>3</sup> on Aug 29 13:00		Maximum Daily Average: 42.5 µg/m <sup>3</sup> on Aug 29		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Aug 4 22:00		Minimum Daily Average: 6.2 µg/m <sup>3</sup> on Aug 3		Hours of Data: 744																							
Maximum Diurnal Average: 25.1 µg/m <sup>3</sup> at hour 10		Minimum Diurnal Average: 9.9 µg/m <sup>3</sup> at hour 2		Hours of Missing Data: 0																							
Monthly Average: 16.21 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 3.9 Q <sub>1</sub> = 6.7 Median = 12.3 Q <sub>3</sub> = 23.0 P <sub>90</sub> = 33.4 P <sub>99</sub> = 52.8		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	19	16	22	16	18	28	22	20	25	77	32	27	38	22	28	30	27	50	23	17	29	18	18	13	26.4	76.7	
2-Aug	17	16	17	26	24	20	30	23	34	26	49	39	18	46	41	17	26	25	15	4	5	5	4	4	23.7	48.5	
3-Aug	6	4	4	4	4	4	4	3	3	9	11	13	8	5	16	7	4	7	6	6	4	6	6	5	6.2	15.9	
4-Aug	2	3	2	3	2	2	2	4	7	11	4	5	4	16	12	6	19	5	7	25	14	0	2	5	6.8	25.3	
5-Aug	7	4	3	7	6	6	24	24	7	6	26	9	11	13	6	13	14	12	29	14	23	8	6	6	11.8	29.1	
6-Aug	6	6	5	6	6	13	14	20	63	51	34	26	26	14	24	14	12	16	21	35	24	23	15	11	20.3	62.8	
7-Aug	11	10	12	13	14	14	23	27	24	16	23	35	28	14	15	19	17	16	15	15	16	16	12	8	17.3	35.1	
8-Aug	11	14	12	12	12	20	22	31	18	25	29	27	43	44	30	13	13	14	18	20	17	8	11	17	20.0	43.6	
9-Aug	10	11	8	9	13	27	24	32	15	12	18	30	42	17	34	18	28	23	33	27	16	20	17	18	21.0	41.6	
10-Aug	20	18	18	19	27	27	14	13	19	24	25	17	18	24	21	18	12	12	7	12	14	6	2	4	16.3	26.7	
11-Aug	1	2	3	1	2	8	8	10	10	8	7	4	9	33	12	50	34	15	46	50	4	2	1	2	13.4	50.4	
12-Aug	4	4	1	1	2	2	4	29	37	6	26	4	15	10	5	12	2	10	5	5	5	4	4	4	8.4	37.3	
13-Aug	2	3	4	5	3	4	6	5	3	5	6	6	7	12	4	15	22	12	7	14	8	8	5	6	7.2	22.3	
14-Aug	5	4	4	7	8	7	10	13	37	80	18	9	5	5	9	6	16	9	10	12	16	12	10	12	13.5	80.3	
15-Aug	16	10	14	10	9	11	10	11	8	35	35	14	16	14	10	20	3	12	22	4	12	4	0	2	12.6	35.2	
16-Aug	2	1	5	6	1	5	26	24	6	10	8	6	7	4	9	12	8	7	16	12	7	2	4	6	8.1	26.2	
17-Aug	4	6	6	4	7	6	6	11	12	19	14	17	21	42	68	54	44	48	8	7	5	7	4	6	17.8	67.5	
18-Aug	5	7	12	12	5	5	51	53	17	11	9	8	30	25	12	15	13	12	14	9	21	19	11	10	16.0	53.5	
19-Aug	7	7	7	7	12	10	9	21	41	42	8	6	5	7	8	14	23	9	8	10	15	24	13	11	13.6	42.3	
20-Aug	10	11	10	8	7	7	10	11	7	7	8	7	6	8	8	7	8	9	7	8	8	8	7	8	8.2	11.3	
21-Aug	10	8	13	10	8	23	26	32	32	12	20	12	25	13	11	13	23	48	5	8	14	7	9	19	16.8	48.2	
22-Aug	20	18	15	15	7	13	10	30	21	15	17	32	32	33	54	3	3	11	21	21	8	13	11	8	17.9	53.5	
23-Aug	12	16	20	19	8	7	6	8	5	10	4	4	3	3	4	4	4	5	6	5	5	5	5	2	7.0	20.0	
24-Aug	2	1	2	2	3	4	10	25	30	30	43	31	18	7	5	19	6	4	5	6	5	3	3	4	11.2	43.2	
25-Aug	3	2	5	3	4	7	6	5	21	20	28	24	22	19	32	27	4	9	18	14	25	2	4	6	12.9	32.3	
26-Aug	5	4	7	7	7	7	11	11	34	33	29	14	10	9	11	12	12	15	18	15	17	12	10	14	13.5	33.8	
27-Aug	12	11	13	14	12	15	35	23	15	14	13	9	11	8	16	23	19	20	14	19	18	11	12	17	15.5	34.6	
28-Aug	10	11	10	11	11	12	16	23	40	23	25	36	44	43	32	24	32	33	33	33	29	27	29	28	25.6	43.7	
29-Aug	26	24	24	25	25	24	29	39	39	54	49	64	83	46	58	42	44	43	57	51	44	42	45	43	42.5	83.0	
30-Aug	36	35	31	31	30	26	28	35	37	33	35	27	26	19	16	19	20	21	35	37	31	35	37	32	29.7	37.4	
31-Aug	27	20	23	21	21	24	30	39	41	54	26	32	29	9	16	17	12	12	11	10	13	13	10	8	21.6	54.1	
		10.6	9.9	10.7	10.8	10.2	12.5	17.0	21.1	22.8	25.1	21.9	19.2	21.4	18.8	20.3	19.0	16.6	17.6	17.8	17.2	15.2	12.0	10.6	10.9	Diurnal Average	
		35.8	34.9	31.4	31.5	29.7	28.5	50.8	53.5	62.8	80.3	49.2	64.1	83.0	46.4	67.5	54.2	44.4	50.1	56.7	51.2	43.8	42.1	44.9	43.0	Diurnal Maximum	



# Hourly Maximums for PM<sub>2.5</sub> at Evergreen Park August 2009



# Pollutant Rose for PM<sub>2.5</sub> at Evergreen Park August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

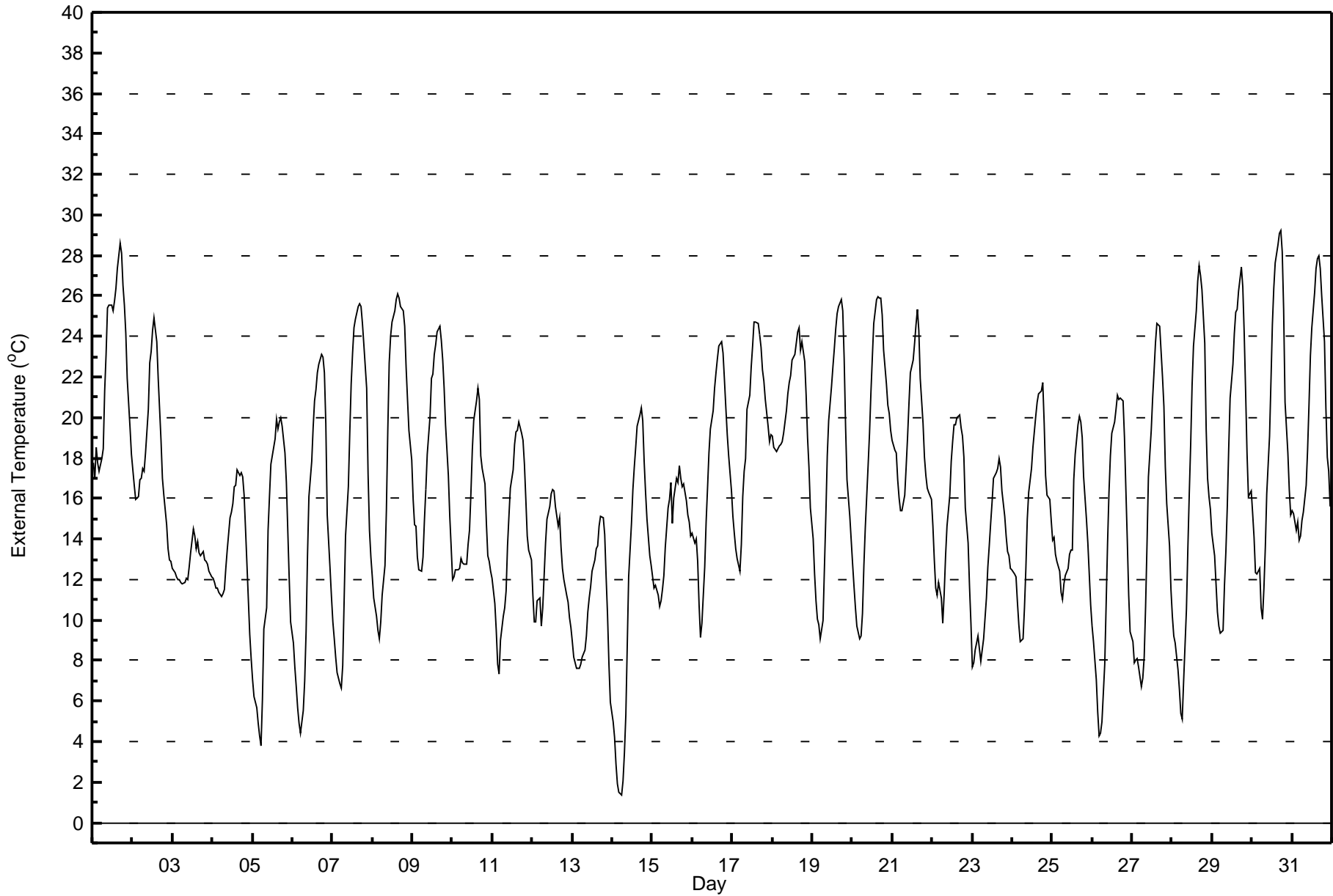
**Evergreen Park - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

Maximum Value: 29.2 °C on Aug 30 18:00	Maximum Daily Average: 22.6 °C on Aug 1	Hours in Service: 744
Minimum Value: 1 °C on Aug 14 06:00	Minimum Daily Average: 10.6 °C on Aug 13	Hours of Data: 744
Maximum Diurnal Average: 22.2 °C at hour 17	Minimum Diurnal Average: 10.1 °C at hour 6	Hours of Missing Data: 0
Monthly Average: 16.11 °C	Percentiles: P <sub>1</sub> = 4.2 P <sub>10</sub> = 9.1 Q <sub>1</sub> = 12.1 Median = 16.0 Q <sub>3</sub> = 20.1 P <sub>90</sub> = 24.2 P <sub>99</sub> = 27.9	Hours of Calibration: 0
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	18	17	19	18	17	18	18	21	23	25	26	26	25	26	26	27	29	28	27	26	24	22	20	18	22.6	28.6
2-Aug	17	17	16	16	17	17	18	17	18	20	23	23	24	25	24	22	20	19	17	16	15	14	13	13	18.4	24.9
3-Aug	13	12	12	12	12	12	12	12	12	12	13	13	14	14	14	14	13	13	13	13	13	12	12	12	12.7	14.5
4-Aug	12	12	12	12	11	11	11	12	13	13	15	15	16	17	17	17	17	17	17	16	15	11	9	8	13.6	17.4
5-Aug	7	6	6	5	4	4	6	10	11	14	16	18	18	19	20	19	20	20	20	18	17	14	12	10	13.1	20.0
6-Aug	9	8	7	6	5	4	6	7	9	13	16	18	19	21	21	22	23	23	23	22	20	15	13	11	14.2	23.1
7-Aug	10	9	8	7	7	7	8	11	14	17	19	22	23	24	25	25	26	26	25	24	21	17	14	13	16.7	25.6
8-Aug	12	11	10	9	9	10	11	13	15	19	23	24	25	25	26	26	26	25	25	24	23	21	19	18	18.8	26.1
9-Aug	16	15	15	13	12	12	13	15	16	18	20	22	22	23	24	24	25	24	23	21	20	17	15	14	18.3	24.5
10-Aug	12	12	12	12	13	13	13	13	13	14	14	16	18	20	21	21	18	17	17	17	15	13	13	12	15.2	21.5
11-Aug	12	11	10	8	7	9	10	11	11	14	15	17	17	19	19	19	20	19	19	18	16	14	13	13	14.2	19.8
12-Aug	11	10	10	11	11	10	11	12	14	15	16	16	16	16	15	15	14	13	12	11	11	10	10	10	12.7	16.5
13-Aug	9	8	8	8	8	8	8	9	9	10	11	12	12	13	14	14	15	15	15	14	12	10	8	6	10.6	15.1
14-Aug	5	4	3	2	1	1	2	3	5	9	12	15	16	18	19	20	20	20	20	18	16	15	13	13	11.3	20.4
15-Aug	12	12	12	11	11	11	11	12	14	16	16	17	15	16	17	17	18	17	17	17	16	15	15	14	14.4	17.6
16-Aug	14	14	14	13	11	9	10	13	15	17	18	19	20	21	22	23	23	24	23	22	20	19	18	16	17.5	23.8
17-Aug	15	14	13	13	12	14	16	17	18	20	21	22	24	25	25	25	24	23	22	22	21	20	19	19	19.4	24.7
18-Aug	19	19	18	18	19	19	19	19	20	21	22	22	23	23	24	24	24	23	24	23	21	19	18	16	20.7	24.4
19-Aug	14	12	11	10	10	9	10	13	15	18	20	22	23	23	24	25	25	26	25	23	20	17	15	14	17.7	25.8
20-Aug	13	12	11	10	9	9	10	13	15	18	19	21	23	25	26	26	26	26	25	23	22	21	20	19	18.3	26.0
21-Aug	19	18	18	17	16	15	15	16	18	19	21	22	23	24	25	25	24	22	20	18	17	17	16	16	19.2	25.3
22-Aug	15	13	12	11	12	11	10	11	13	15	16	18	19	20	20	20	20	20	19	18	16	14	12	10	15.1	20.1
23-Aug	8	8	9	9	9	8	8	9	11	13	14	15	16	17	17	17	18	18	16	15	14	13	13	13	12.8	17.9
24-Aug	12	12	12	11	10	9	9	11	13	15	16	18	19	19	20	21	21	21	22	20	17	16	16	15	15.6	21.7
25-Aug	14	14	13	13	12	11	11	12	12	13	13	13	13	17	18	20	20	20	19	17	15	14	12	11	14.5	20.1
26-Aug	10	9	7	5	4	4	5	8	11	14	16	18	19	20	20	21	21	21	21	19	16	14	11	9	13.5	21.1
27-Aug	9	8	8	8	8	7	7	8	11	14	17	19	21	22	24	25	24	23	22	21	18	16	14	12	15.2	24.7
28-Aug	10	9	9	8	7	5	5	7	11	14	16	19	22	24	25	27	28	27	26	24	19	17	16	15	16.2	27.5
29-Aug	14	13	12	10	10	9	9	12	13	16	18	21	23	24	25	25	26	27	26	24	21	18	16	16	18.0	27.4
30-Aug	15	14	12	12	13	11	10	12	14	16	19	22	25	26	28	29	29	29	29	28	25	21	18	15	19.1	29.2
31-Aug	15	15	14	15	14	14	15	15	17	18	21	23	24	26	27	28	28	27	26	24	20	18	17	16	20.0	28.0

12.6	11.9	11.3	10.8	10.3	10.1	10.6	12.0	13.7	15.8	17.5	18.9	20.0	21.0	21.6	22.1	22.2	21.8	21.1	19.8	17.8	15.9	14.5	13.4	Diurnal Average
19.1	18.6	18.5	18.5	18.6	18.7	18.8	21.3	23.1	25.4	25.6	25.5	25.3	26.4	27.6	28.5	29.1	29.2	28.2	25.6	24.2	21.9	20.2	19.3	Diurnal Maximum

# Hourly Averages for External Temperature at Evergreen Park August 2009

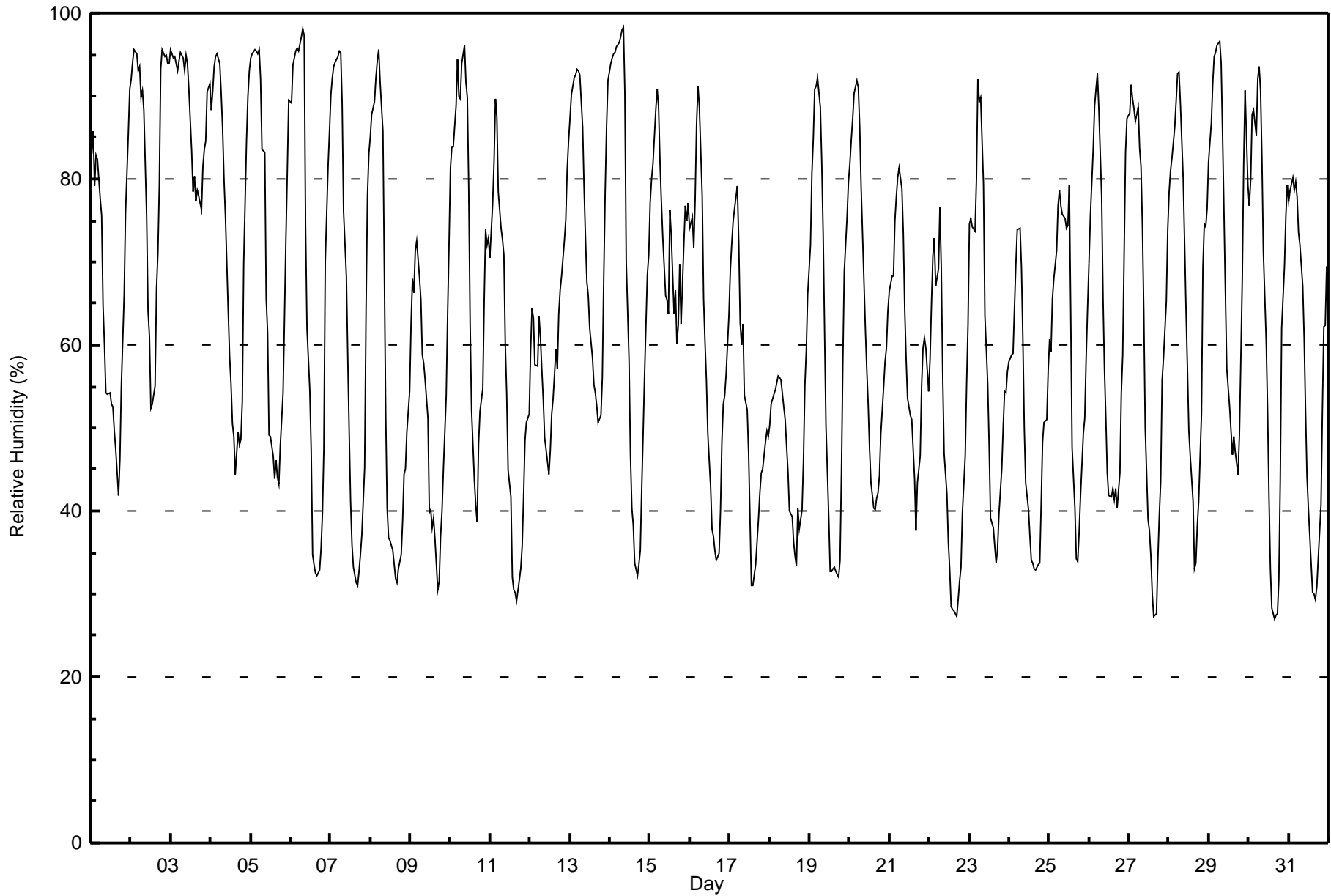


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - Relative Humidity (RH) - %  
August 1, 2009 to September 1, 2009**

Maximum Value: 98.3 % on Aug 14 09:00		Maximum Daily Average: 88.0 % on Aug 3		Hours in Service: 744																						
Minimum Value: 27 % on Aug 30 16:00		Minimum Daily Average: 48.3 % on Aug 18		Hours of Data: 744																						
Maximum Diurnal Average: 85.6 % at hour 6		Minimum Diurnal Average: 39.7 % at hour 17		Hours of Missing Data: 0																						
Monthly Average: 63.66 %		Percentiles: P <sub>1</sub> = 28.1 P <sub>10</sub> = 34.8 Q <sub>1</sub> = 46.6 Median = 63.2 Q <sub>3</sub> = 81.3 P <sub>90</sub> = 92.1 P <sub>99</sub> = 96.0		Hours of Calibration: 0																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	83	86	79	83	82	78	76	65	60	54	54	53	52	50	47	42	46	55	60	66	76	86	91	65.7	90.9	
2-Aug	92	94	96	95	93	94	90	91	88	75	64	61	52	53	55	67	71	79	93	96	95	95	94	94	82.3	95.5
3-Aug	96	95	95	94	93	94	95	95	93	95	94	91	83	78	80	77	79	78	76	82	84	85	91	91	88.0	95.6
4-Aug	88	91	94	95	95	94	90	86	80	76	64	59	55	50	49	44	50	48	49	53	70	85	90	93	72.8	95.0
5-Aug	95	95	96	95	95	96	92	84	83	66	62	49	49	47	44	46	44	43	48	54	63	73	81	90	70.3	95.6
6-Aug	89	94	95	95	96	95	97	98	97	74	62	55	47	35	33	33	32	33	35	40	47	70	82	86	67.5	98.1
7-Aug	90	92	94	94	95	95	95	89	76	68	58	50	41	36	33	31	31	33	35	37	45	64	78	83	64.4	95.4
8-Aug	85	88	89	92	94	96	92	86	69	52	40	37	36	35	34	32	31	33	35	39	44	45	49	54	57.8	95.5
9-Aug	63	68	66	71	73	68	66	59	58	56	51	40	40	38	39	37	31	32	37	40	45	54	64	72	52.7	72.6
10-Aug	81	84	84	89	94	90	90	94	96	92	90	79	63	52	44	41	39	48	52	55	65	74	72	73	72.5	96.0
11-Aug	71	77	82	90	87	78	74	73	71	60	54	45	42	32	30	30	29	32	33	36	42	48	51	52	54.9	89.7
12-Aug	59	64	63	58	58	63	61	57	53	49	46	44	47	52	54	59	57	64	67	68	73	75	81	85	60.7	84.7
13-Aug	87	90	92	92	93	93	92	86	79	73	68	66	62	58	55	54	53	51	51	56	68	78	86	92	74.1	93.2
14-Aug	94	95	95	95	96	96	97	98	98	91	70	58	47	40	38	34	32	34	35	43	49	56	69	71	68.0	98.3
15-Aug	77	80	82	88	91	89	82	77	73	66	65	64	76	73	64	67	60	62	70	63	72	77	75	77	73.7	90.8
16-Aug	74	75	72	78	87	91	89	78	66	60	56	49	43	38	37	35	34	35	40	48	53	54	56	64	58.8	91.2
17-Aug	69	72	75	76	79	72	63	60	62	54	52	47	39	31	31	34	36	39	42	45	45	48	50	49	53.0	79.2
18-Aug	50	53	54	55	55	56	56	56	53	51	48	45	40	39	36	35	33	40	38	40	46	55	59	66	48.3	66.2
19-Aug	72	81	85	91	91	92	89	82	73	62	50	39	33	33	33	33	33	32	34	45	58	69	75	80	61.0	92.1
20-Aug	82	85	87	90	92	91	86	79	73	62	57	53	48	43	40	40	42	42	44	49	55	58	60	64	63.5	91.9
21-Aug	66	68	68	75	78	80	81	79	73	64	58	54	52	51	47	44	38	43	47	55	60	61	60	54	60.7	81.3
22-Aug	58	65	71	73	67	69	77	69	56	47	42	36	33	28	28	27	29	32	33	40	47	55	63	48.9	76.6	
23-Aug	75	75	74	74	80	92	89	90	79	64	59	55	48	39	38	36	34	35	40	45	50	54	54	57	59.9	92.0
24-Aug	58	59	59	64	70	74	74	69	61	50	43	40	37	34	34	33	33	34	34	41	48	51	51	57	50.3	74.0
25-Aug	61	59	66	68	71	77	79	77	76	75	74	74	79	64	48	40	34	34	37	42	49	51	58	64	60.8	79.2
26-Aug	70	76	84	89	91	93	88	78	66	57	51	45	42	42	43	41	43	40	45	54	59	71	83	87	64.0	92.7
27-Aug	88	91	90	88	87	89	84	82	74	64	50	39	38	35	30	27	28	34	39	43	56	58	65	74	60.6	91.3
28-Aug	79	81	82	86	90	93	93	89	80	72	64	57	50	47	41	33	34	38	41	52	69	75	74	77	66.5	92.9
29-Aug	82	87	91	95	95	96	97	94	85	76	66	57	53	50	47	49	47	44	49	58	68	82	91	79	72.4	96.6
30-Aug	77	80	88	88	85	92	94	91	82	71	60	52	42	33	28	27	27	28	32	43	62	70	76	79	62.8	93.6
31-Aug	77	79	80	79	80	78	74	72	67	61	52	44	40	34	30	30	29	31	34	41	52	62	62	69	56.6	80.2
		77.0	79.9	81.5	83.7	84.9	85.6	83.9	80.0	74.3	65.7	58.9	52.8	48.7	44.3	41.7	40.8	39.7	41.8	45.1	50.2	58.1	65.2	70.3	73.8	Diurnal Average
		95.6	95.1	95.6	95.5	96.0	96.5	97.2	98.1	98.3	94.9	93.9	90.9	83.3	78.5	80.3	77.4	78.6	79.1	93.3	95.5	94.8	95.0	93.9	93.8	Diurnal Maximum

# Hourly Averages for Relative Humidity at Evergreen Park August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Evergreen Park  
 August 1, 2009 to September 1, 2009  
 WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	0	2	3	0	2	2	2	5	7	8	9	12	16	15	16	15	12	4	4	2	2	1	1	0	4.8	15.9
Dir	239	226	258	192	351	275	291	283	289	315	306	277	268	260	268	269	274	22	142	177	203	211	65	90	274.3	267.7
2 Spd	1	1	0	1	2	4	3	2	4	6	2	6	2	5	9	10	8	6	3	7	6	4	2	1	2.1	9.7
Dir	188	225	187	261	216	209	331	194	208	221	39	57	64	56	71	74	82	64	54	58	95	79	112	148	82.3	74.0
3 Spd	3	3	3	3	3	3	3	4	4	5	7	6	6	5	8	8	6	4	3	4	3	2	1	2	3.7	8.1
Dir	71	85	84	89	93	102	75	80	62	81	79	90	85	54	58	48	47	48	28	15	6	30	4	5	63.0	48.1
4 Spd	2	0	1	1	1	2	3	4	4	4	6	6	6	6	5	6	6	4	3	1	0	0	0	0	2.9	6.4
Dir	39	240	329	343	7	28	49	63	60	75	93	56	54	59	48	36	55	37	67	103	67	11	352	326	55.8	48.3
5 Spd	0	1	0	1	1	1	1	1	3	3	4	4	4	5	4	7	4	7	5	3	2	1	1	1	1.9	6.9
Dir	35	35	69	211	213	50	59	55	209	134	182	125	98	67	105	126	145	199	154	162	122	126	117	62	137.0	126.2
6 Spd	1	1	1	1	0	1	1	2	1	1	2	4	5	5	4	4	3	3	3	2	2	0	1	0	0.8	4.8
Dir	55	74	70	70	264	196	209	207	246	313	167	220	226	226	234	327	291	267	90	103	163	352	53	102	228.3	225.7
7 Spd	0	0	0	1	0	1	2	3	3	3	4	5	5	3	4	3	3	5	7	5	2	0	1	0	1.7	6.6
Dir	23	250	166	198	295	205	205	221	238	209	221	182	199	194	141	142	124	124	113	114	111	60	41	38	162.7	113.3
8 Spd	0	0	1	0	1	3	3	3	5	10	16	19	17	19	17	20	17	13	9	7	5	6	4	4	8.0	19.8
Dir	274	208	209	184	207	212	204	201	253	255	262	277	278	268	271	268	278	282	293	279	243	261	270	261	267.6	267.6
9 Spd	2	1	3	3	2	4	3	7	6	8	7	8	6	6	5	6	13	10	7	7	3	2	0	1	4.5	12.7
Dir	236	246	267	338	341	300	309	278	286	280	280	278	255	257	226	227	270	264	293	289	269	195	165	210	271.8	269.6
10 Spd	1	1	1	2	2	8	8	4	2	5	6	7	8	7	9	8	15	14	10	11	17	14	11	7	6.1	17.4
Dir	70	73	42	61	237	324	345	328	230	240	220	222	246	278	282	283	267	243	252	271	253	237	237	229	259.4	253.5
11 Spd	6	1	1	1	3	7	4	4	4	8	10	13	15	20	17	18	19	15	16	16	7	8	10	10	9.4	20.0
Dir	244	260	227	243	238	260	255	233	326	260	252	243	242	269	275	277	273	273	267	265	250	236	240	238	260.0	269.4
12 Spd	7	6	8	12	10	9	11	14	16	15	15	13	13	14	17	17	16	13	13	11	7	5	4	3	7.9	17.3
Dir	221	223	227	238	248	234	246	261	271	293	289	312	338	345	349	349	338	342	347	348	352	332	317	308	305.0	348.7
13 Spd	3	2	0	1	1	1	1	2	3	2	3	2	2	1	4	3	5	4	6	4	2	1	0	0	0.7	5.6
Dir	318	303	345	204	209	78	96	86	106	67	37	145	52	245	221	248	241	226	215	192	166	144	206	76	202.3	215.0
14 Spd	2	0	0	1	0	1	2	2	1	2	2	5	4	2	3	3	1	3	3	2	2	1	1	2	0.9	5.5
Dir	80	58	180	70	280	171	200	244	218	226	244	219	221	107	67	315	164	216	152	134	147	105	222	264	198.6	219.5
15 Spd	1	1	2	1	1	2	5	6	12	14	14	13	9	5	8	9	7	6	6	6	5	7	5	4	5.5	13.8
Dir	149	163	210	19	212	257	257	261	268	274	272	262	334	321	292	244	290	291	251	281	260	258	255	232	271.3	274.0
16 Spd	4	4	3	0	1	0	1	3	8	7	4	5	6	7	8	7	8	7	6	5	8	10	8	5	4.5	10.1
Dir	250	234	266	214	210	183	231	241	267	288	299	297	315	318	318	294	305	310	281	240	245	250	247	221	275.9	249.7
17 Spd	3	1	3	2	2	8	8	6	3	11	11	15	23	22	23	20	21	20	16	11	10	5	14	19	11.0	22.7
Dir	203	199	195	171	182	229	243	247	205	256	257	259	259	267	273	277	268	265	267	265	268	254	266	271	260.8	259.1
18 Spd	17	17	20	20	16	16	17	17	17	18	18	15	13	15	14	16	14	5	7	6	3	2	1	2	11.6	20.1
Dir	272	269	268	272	280	280	275	276	292	286	300	310	311	319	313	302	323	31	327	308	275	12	97	56	292.2	267.8
19 Spd	0	0	1	0	1	1	1	2	2	2	4	5	5	4	3	3	3	1	3	1	0	0	1	1	0.8	4.9
Dir	143	26	265	10	300	315	339	278	263	194	189	172	197	204	208	262	249	333	14	57	218	90	53	64	218.7	196.7
20 Spd	1	1	0	1	1	1	2	2	4	4	7	7	10	9	8	8	8	9	9	6	5	6	6	5	4.9	10.1
Dir	69	48	241	31	53	66	53	66	94	95	103	100	115	107	121	105	104	108	110	104	98	99	108	101	103.1	114.8
21 Spd	5	5	2	2	2	2	6	5	7	8	2	4	6	5	3	4	14	18	14	11	10	13	12	12	5.0	17.9
Dir	95	94	103	358	29	251	315	316	322	348	265	206	259	199	206	261	257	259	246	230	249	254	258	248	258.1	258.6
22 Spd	2	2	1	3	6	5	4	5	9	13	12	13	16	19	14	13	11	9	10	8	4	2	2	1	7.3	18.9
Dir	232	250	274	285	257	250	223	264	263	259	271	275	272	262	268	273	287	292	283	298	324	271	189	201	270.4	262.4

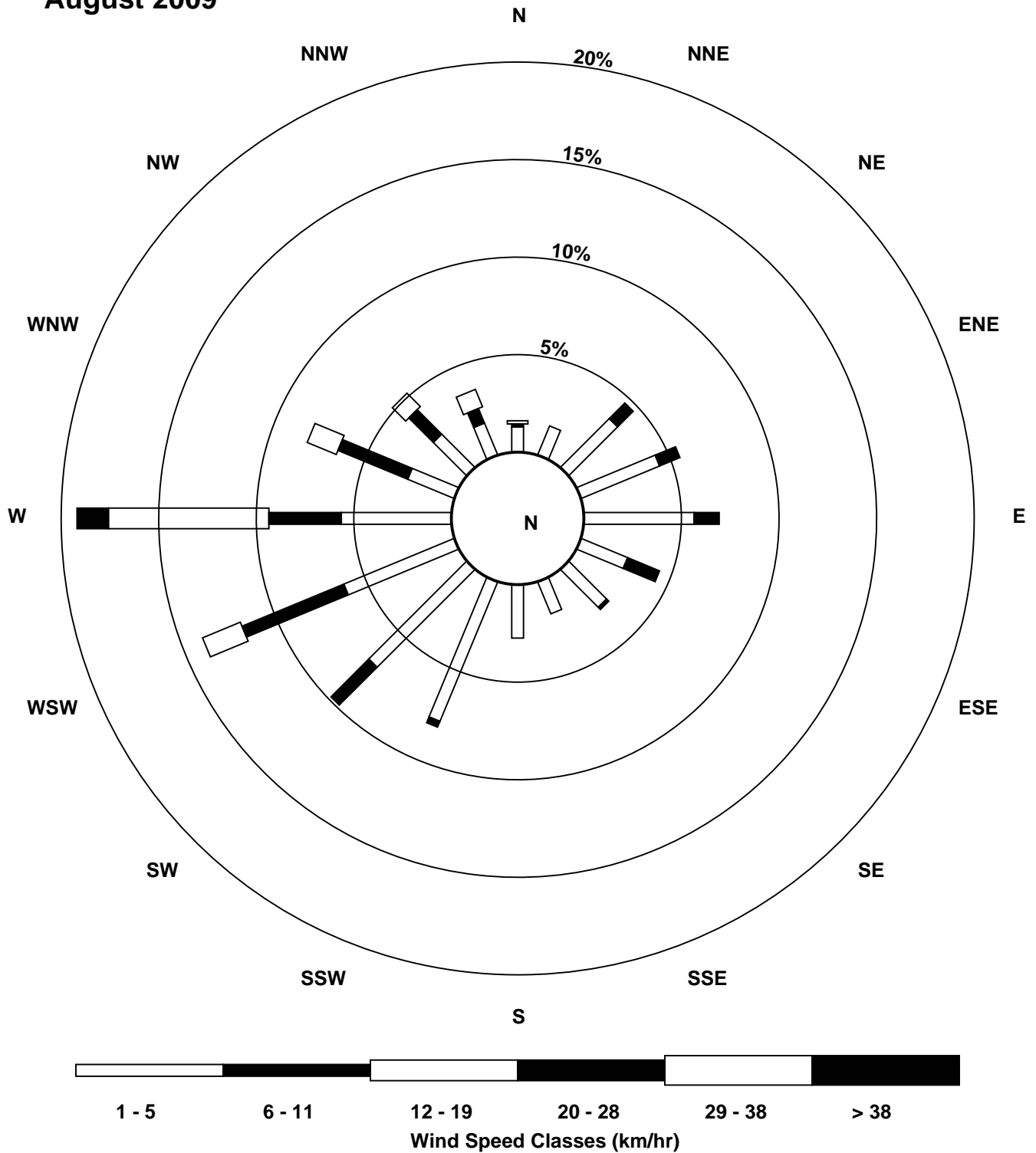
**Peace Airshed Zone Association  
Summary of Hourly Averages**

Evergreen Park  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	1	2	2	3	1	1	1	2	5	6	6	5	14	14	15	17	16	16	10	6	6	9	9	6.2	16.7
Dir	4	291	6	211	195	349	13	191	231	238	217	201	253	265	273	285	287	289	273	263	244	244	252	239	263.0	286.6
24 Spd	10	9	8	6	4	4	4	4	9	14	17	15	12	11	8	6	3	1	1	2	3	3	3	2	5.2	17.2
Dir	236	235	247	239	251	241	242	277	276	269	270	272	280	277	283	295	313	81	143	103	121	125	137	94	261.8	269.8
25 Spd	3	3	2	2	2	2	1	1	3	4	5	6	1	1	7	13	13	11	6	6	6	7	4	2	3.1	13.2
Dir	89	96	82	94	84	91	51	58	292	294	270	243	114	36	304	280	281	284	302	291	287	292	256	224	286.0	280.6
26 Spd	2	1	1	0	1	1	2	4	4	3	3	2	5	5	5	3	3	2	4	4	2	1	0	0	1.8	5.2
Dir	218	46	111	209	210	228	329	338	267	277	221	218	218	200	205	179	221	223	213	219	204	220	76	232	224.8	205.3
27 Spd	1	1	2	2	3	2	3	4	6	3	2	3	2	2	3	2	4	4	3	3	2	2	2	1	0.7	5.6
Dir	236	219	274	257	274	327	266	233	262	289	182	169	146	131	186	165	119	99	85	91	81	92	87	58	181.8	261.7
28 Spd	1	1	0	0	0	0	0	1	0	3	1	1	3	4	4	3	4	3	2	1	1	2	2	2	1.0	4.3
Dir	354	340	193	248	128	17	214	200	231	211	236	308	135	184	98	108	91	89	88	75	48	81	73	71	105.9	89.5
29 Spd	1	1	1	1	0	1	1	3	4	4	5	3	3	4	4	6	4	3	3	2	1	0	1	2	2.0	6.0
Dir	56	233	53	204	203	187	207	214	251	264	269	255	274	249	265	220	208	219	186	187	189	289	13	271	237.7	220.0
30 Spd	2	0	2	4	1	1	1	3	4	1	3	4	6	7	7	5	3	2	2	1	0	0	0	1	2.0	7.5
Dir	290	231	220	216	221	172	145	203	214	5	223	207	224	246	257	256	232	193	151	113	253	162	359	349	228.0	256.7
31 Spd	3	1	2	4	2	3	4	4	5	4	5	4	3	2	3	3	3	5	5	2	1	1	2	0	1.7	5.3
Dir	329	325	306	283	275	279	280	286	283	291	272	319	314	354	339	25	42	62	59	59	37	54	74	357	326.5	59.3
Spd	1.1	1.1	1.5	1.4	1.5	2.0	2.1	2.6	3.8	4.5	4.4	4.4	4.3	4.7	4.5	4.8	5.2	3.6	2.6	2.2	1.9	1.9	1.9	1.9	Diurnal Average	
Dir	249.9	242.4	252.2	255.3	255.3	260.4	271.6	263.6	270.6	273.1	265.0	260.4	268.5	273.1	281.7	282.3	283.1	278.9	271.4	269.7	255.0	248.6	246.9	248.0	Diurnal Maximum	
Spd	16.9	16.6	20.1	19.6	16.0	16.2	17.5	16.8	17.0	17.7	17.6	18.7	22.7	21.9	22.5	20.2	20.6	20.2	16.5	15.5	17.4	13.9	13.8	18.7	Diurnal Maximum	
Dir	271.6	268.5	267.8	271.9	279.6	279.9	275.5	275.8	291.7	285.5	300.5	277.2	259.1	267.1	272.9	276.9	268.4	264.9	266.9	265.3	253.5	236.9	266.2	271.2	Diurnal Maximum	
Maximum Speed Value: 23 km/h on Aug 17 13:00		Minimum Speed Value: 0 km/h on Aug 28 04:00																Hours in Service: 744								
Maximum Daily Speed Average: 11.6 km/h on Aug 18		Minimum Daily Speed Average: 0.7 km/h on Aug 19																Hours of Data: 744								
Maximum Diurnal Speed Average: 5.2 km/h at hour 17		Minimum Diurnal Speed Average: 1.1 km/h at hour 2																Hours of Missing Data: 0								
Monthly Average Velocity: 2.86 km/h 268.10 deg		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 1.6 Median = 3.5 Q <sub>3</sub> = 6.9 P <sub>90</sub> = 13.6 P <sub>99</sub> = 20.1																Percent Operational Time: 100.0								
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	35	4	7	0	0	0	46																			
NorthEast	64	14	0	0	0	0	78																			
East	69	21	0	0	0	0	90																			
SouthEast	32	6	0	0	0	0	38																			
South	54	4	0	0	0	0	58																			
SouthWest	114	41	8	0	0	0	163																			
West	71	59	67	11	0	0	208																			
NorthWest	33	21	9	0	0	0	63																			
Total	472	170	91	11	0	0	744																			



# Wind Rose for WS at Evergreen Park August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Evergreen Park - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 23 km/h on Aug 17 15:00	Maximum Daily Speed Average: 13.2 km/h on Aug 18	Hours in Service: 744
Minimum Speed: 1 km/h on Aug 5 00:00	Minimum Daily Speed Average: 2.4 km/h on Aug 28	Hours of Data: 744
Maximum Diurnal Speed Average: 9.5 km/h at hour 15	Minimum Diurnal Speed Average: 2.7 km/h at hour 2	Hours of Missing Data: 0
Monthly Average Speed: 5.75 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.2 Q <sub>1</sub> = 2.1 Median = 4.3 Q <sub>3</sub> = 7.4 P <sub>90</sub> = 13.9 P <sub>99</sub> = 20.4	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	2	3	1	2	3	2	5	8	8	9	13	16	16	16	15	13	8	4	2	2	1	1	1	6.4	16.0
2-Aug	2	1	1	2	4	5	5	4	5	6	4	7	5	5	9	10	8	6	4	7	6	4	3	2	4.8	10.0
3-Aug	3	3	3	4	3	3	3	5	4	5	7	6	6	6	8	8	6	4	4	4	4	2	1	2	4.4	8.5
4-Aug	2	1	1	1	1	2	3	4	5	5	7	6	7	6	7	6	7	6	4	3	1	1	1	1	3.6	7.3
5-Aug	1	1	1	1	1	1	1	2	4	4	5	5	6	6	7	7	5	8	7	4	2	1	1	1	3.4	7.5
6-Aug	1	1	1	1	1	1	1	2	2	3	4	5	5	6	6	5	5	4	3	2	2	1	2	1	2.8	6.2
7-Aug	1	1	1	1	1	1	3	3	4	4	4	5	6	5	6	5	5	6	7	5	2	1	1	1	3.2	6.8
8-Aug	1	1	2	1	2	3	3	3	6	10	16	19	18	19	18	20	18	13	10	7	5	6	4	4	8.7	20.3
9-Aug	2	2	4	4	2	5	3	7	7	9	7	9	6	7	8	8	13	11	7	7	3	2	1	1	5.6	13.1
10-Aug	2	2	2	2	4	9	8	4	2	5	6	7	9	8	10	9	15	14	11	12	18	14	11	7	8.0	18.1
11-Aug	6	2	1	2	5	8	4	5	4	8	10	14	16	21	18	19	19	16	17	16	8	8	10	10	10.2	20.7
12-Aug	7	6	8	12	10	9	11	14	16	16	15	14	14	15	18	17	17	14	14	11	7	5	4	3	11.5	17.7
13-Aug	3	2	1	1	1	1	1	2	4	3	3	3	4	4	4	4	5	5	6	4	2	1	1	1	2.9	5.9
14-Aug	2	1	1	1	1	1	2	3	2	3	3	6	6	4	4	5	3	4	3	2	2	1	2	2	2.6	6.3
15-Aug	2	2	3	1	2	2	5	6	12	14	14	13	10	6	10	9	8	7	6	6	5	7	5	4	6.6	14.2
16-Aug	4	4	3	1	1	1	1	3	8	7	6	7	7	8	9	8	9	8	7	6	8	10	8	5	5.8	10.2
17-Aug	3	2	3	2	3	9	9	6	4	11	11	16	23	23	23	20	21	20	17	11	10	5	14	19	11.8	23.1
18-Aug	17	17	20	20	16	16	18	17	17	18	18	16	14	16	15	17	14	6	7	6	4	4	2	2	13.2	20.2
19-Aug	2	1	2	1	1	1	1	2	2	3	5	6	7	6	5	5	4	4	3	1	1	1	1	1	2.8	7.2
20-Aug	1	1	1	1	1	1	2	2	4	5	7	8	11	10	9	8	8	9	9	7	6	6	7	5	5.4	10.7
21-Aug	5	5	3	3	2	3	7	7	8	9	4	6	7	6	4	5	14	18	14	11	10	13	12	12	7.9	18.2
22-Aug	3	3	3	3	6	5	4	6	10	14	12	13	16	19	15	13	12	10	11	8	4	3	3	1	8.2	19.4
23-Aug	2	2	3	3	4	2	2	2	3	6	6	7	7	15	14	16	17	16	16	10	6	6	10	9	7.6	17.5
24-Aug	10	9	8	6	4	4	5	4	10	14	17	16	13	12	10	7	5	3	2	2	3	3	3	3	7.2	17.5
25-Aug	3	3	2	3	2	3	2	2	4	5	5	6	3	3	8	14	14	11	6	6	6	7	5	3	5.3	13.8
26-Aug	2	2	2	1	2	2	3	4	4	4	4	4	6	7	6	5	4	3	4	4	2	2	1	1	3.2	6.6
27-Aug	1	1	3	3	4	2	3	4	6	4	3	4	5	4	4	4	5	4	3	3	2	2	2	1	3.2	5.8
28-Aug	1	1	1	1	1	1	1	2	2	3	2	3	3	4	4	4	4	5	3	2	1	1	2	2	2.4	4.7
29-Aug	1	2	1	2	1	2	2	3	4	4	5	4	4	5	5	6	5	3	3	2	1	1	1	2	2.9	6.2
30-Aug	2	1	2	4	1	2	1	3	4	3	3	5	6	8	8	6	4	3	3	1	1	1	1	1	3.1	8.3
31-Aug	3	1	2	4	2	4	4	4	5	4	5	5	4	4	4	4	4	5	5	2	1	1	2	1	3.5	5.4

3.1	2.7	3.0	3.0	2.9	3.6	3.8	4.5	5.7	6.9	7.5	8.3	8.7	9.1	9.5	9.4	9.4	8.2	7.1	5.7	4.4	4.0	4.0	3.6	Diurnal Average
17.0	16.7	20.2	19.8	16.2	16.3	17.6	17.0	17.4	18.1	18.4	19.3	23.1	22.6	23.1	20.5	20.8	20.4	16.9	15.7	18.1	14.1	13.9	18.8	Diurnal Maximum

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Evergreen Park - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 99.2 deg on Aug 2 00:00																								Hours in Service:	744
Minimum Value: 5.0 deg on Aug 12 04:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 6.1 P <sub>10</sub> = 11.0 Q <sub>1</sub> = 15.9 Median = 28.5 Q <sub>3</sub> = 56.3 P <sub>90</sub> = 77.8 P <sub>99</sub> = 93.8																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	95	78	17	77	48	64	40	27	17	26	18	25	8	11	9	11	15	64	32	21	29	58	78	99	
2-Aug	82	60	86	82	68	58	67	79	14	15	92	34	77	35	23	17	18	21	71	21	28	28	58	53	
3-Aug	17	22	21	15	21	27	17	13	23	22	18	23	21	31	20	14	17	14	24	25	21	28	35	35	
4-Aug	22	78	45	65	24	31	18	23	27	34	34	25	35	23	34	42	26	22	28	17	46	67	81	73	
5-Aug	92	59	85	79	53	75	36	61	66	57	49	56	54	51	64	26	45	27	39	31	15	60	62	33	
6-Aug	33	81	62	58	88	34	35	40	71	72	65	40	45	56	64	69	59	65	35	24	28	90	51	78	
7-Aug	88	90	81	67	86	59	19	28	37	46	41	33	50	56	57	62	57	32	15	12	16	83	34	81	
8-Aug	85	84	54	71	24	10	11	13	23	10	11	15	14	11	15	11	15	15	13	13	14	10	8	12	
9-Aug	30	72	26	46	29	29	26	14	23	17	30	25	29	37	52	39	16	14	17	14	24	41	86	78	
10-Aug	62	59	51	19	82	24	12	47	41	16	14	13	25	30	21	27	14	12	12	20	16	8	8	7	
11-Aug	29	37	84	44	51	16	40	28	19	15	19	15	14	15	14	13	11	17	13	8	12	5	9	5	
12-Aug	15	10	8	5	7	6	8	7	12	19	13	21	23	15	14	12	16	14	13	13	16	17	16	14	
13-Aug	17	30	95	94	65	70	30	34	28	67	54	71	65	83	65	45	37	43	22	28	19	29	74	86	
14-Aug	10	78	74	68	82	61	26	33	55	55	69	34	53	55	42	74	90	47	38	21	53	58	53	61	
15-Aug	95	69	49	64	65	45	17	13	10	13	12	16	20	20	30	16	30	35	20	16	11	9	15	11	
16-Aug	14	15	14	91	77	76	72	27	14	21	44	48	48	30	30	34	29	25	18	12	11	9	9	10	
17-Aug	9	59	42	38	32	9	10	23	33	14	13	11	10	14	13	10	8	8	9	9	11	26	8	6	
18-Aug	6	6	6	7	10	8	8	10	11	12	16	19	21	17	19	20	18	37	25	17	15	62	74	26	
19-Aug	89	83	80	80	43	65	33	40	53	56	37	40	56	69	74	76	60	90	30	54	92	94	76	49	
20-Aug	89	72	92	56	33	23	22	26	25	24	24	27	20	21	22	20	20	17	14	14	13	13	14	15	
21-Aug	17	12	79	59	36	66	24	45	24	23	87	49	42	32	47	47	10	9	12	9	10	11	8	9	
22-Aug	86	38	66	27	17	20	15	30	19	10	17	16	16	13	20	19	18	18	12	14	11	38	47	65	
23-Aug	81	82	54	71	44	80	74	77	28	24	18	29	40	16	17	14	18	14	11	9	15	14	9	7	
24-Aug	6	7	8	5	12	9	32	26	17	11	11	17	23	25	44	38	77	78	71	16	10	10	18	23	
25-Aug	23	19	42	19	33	74	59	47	56	24	16	18	94	69	28	20	17	14	18	15	17	16	39	57	
26-Aug	68	56	73	85	61	75	50	12	25	47	39	85	36	45	45	65	45	48	13	19	25	84	81	72	
27-Aug	74	48	42	36	33	32	26	18	14	49	79	49	61	67	55	79	45	21	14	10	11	39	27	67	
28-Aug	48	56	87	99	70	83	75	63	92	28	88	77	75	50	34	40	34	25	18	23	35	29	11	18	
29-Aug	52	58	78	82	87	79	49	15	19	21	34	49	55	44	36	16	18	17	14	15	56	76	61	38	
30-Aug	57	93	37	8	79	69	56	12	11	73	31	23	27	30	26	34	56	49	26	56	78	74	79	67	
31-Aug	20	26	17	18	40	25	18	25	17	23	25	39	57	83	67	54	42	25	13	11	45	44	15	82	
	95.2	93.4	94.9	98.5	88.3	82.6	74.6	78.8	92.5	73.3	92.5	85.0	94.3	83.2	73.9	78.5	89.5	90.4	71.3	55.8	91.9	93.8	85.6	99.2	

# PASZA

## Smoky Heights Station

### Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association  
Summary of Hourly Averages**

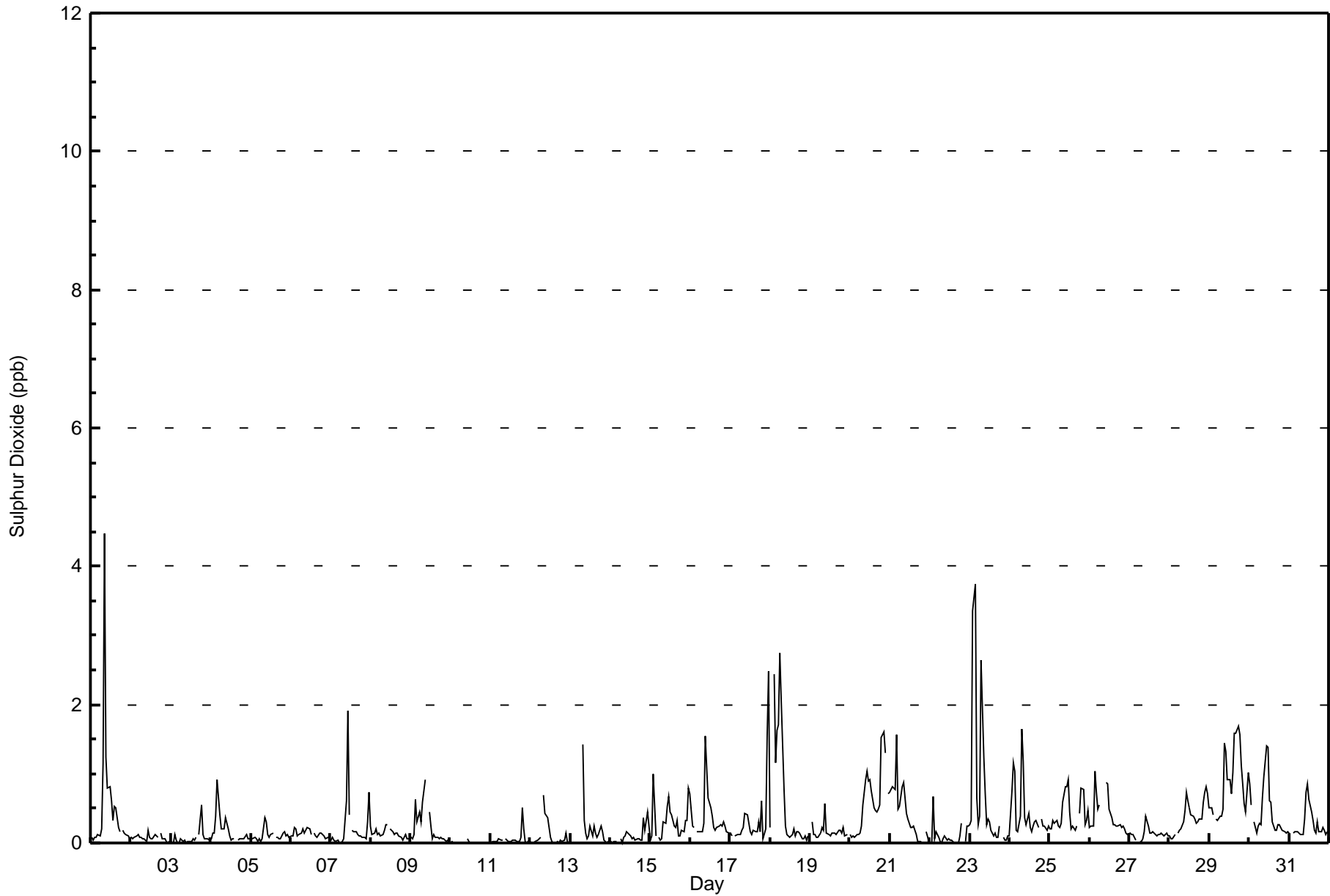
**Smoky Heights - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 4.5 ppb on Aug 1 09:00	Maximum Daily Average: 0.9 ppb on Aug 29
Minimum Value: 0 ppb on Aug 3 05:00	Hours of Data: 710
Maximum Diurnal Average: 0.5 ppb at hour 9	Hours of Missing Data: 34
Monthly Average: 0.29 ppb	Hours of Calibration: 34
Minimum Daily Average: 0.0 ppb on Aug 10	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.2 ppb at hour 1	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.8 P <sub>99</sub> = 2.4	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	1	4	1	1	1	1	0	1	1	0	0	A	0	0	0	0	0	0.5	4.5
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0.1	0.6
4-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.9
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
7-Aug	0	0	0	0	0	0	0	0	0	1	2	0	A	0	0	0	0	0	0	0	0	0	0	1	0.2	1.9
8-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Aug	0	0	0	1	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
10-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	0.5
12-Aug	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
13-Aug	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
14-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
15-Aug	0	0	1	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.0
16-Aug	1	0	0	A	0	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
17-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.4	2.5
18-Aug	0	A	2	1	2	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7
19-Aug	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.6
20-Aug	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	2	2	1	A	0.6	1.6
21-Aug	1	1	1	1	2	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.6
22-Aug	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.7
23-Aug	0	0	3	4	1	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.7	3.8
24-Aug	0	1	1	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	1.7
25-Aug	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	1	1	0	0	0	0.4	0.9
26-Aug	0	0	0	1	1	0	1	C	C	C	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
27-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
28-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0.4	0.8
29-Aug	1	1	0	A	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	1	1	1	0	1	0.9	1.7
30-Aug	1	1	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.4
31-Aug	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	Diurnal Average
	0.9	0.8	3.4	3.8	1.6	1.7	2.7	2.6	4.5	1.6	1.9	1.4	0.9	0.8	1.0	1.6	1.6	1.7	1.6	1.5	1.6	1.3	1.5	2.5	Diurnal Maximum	

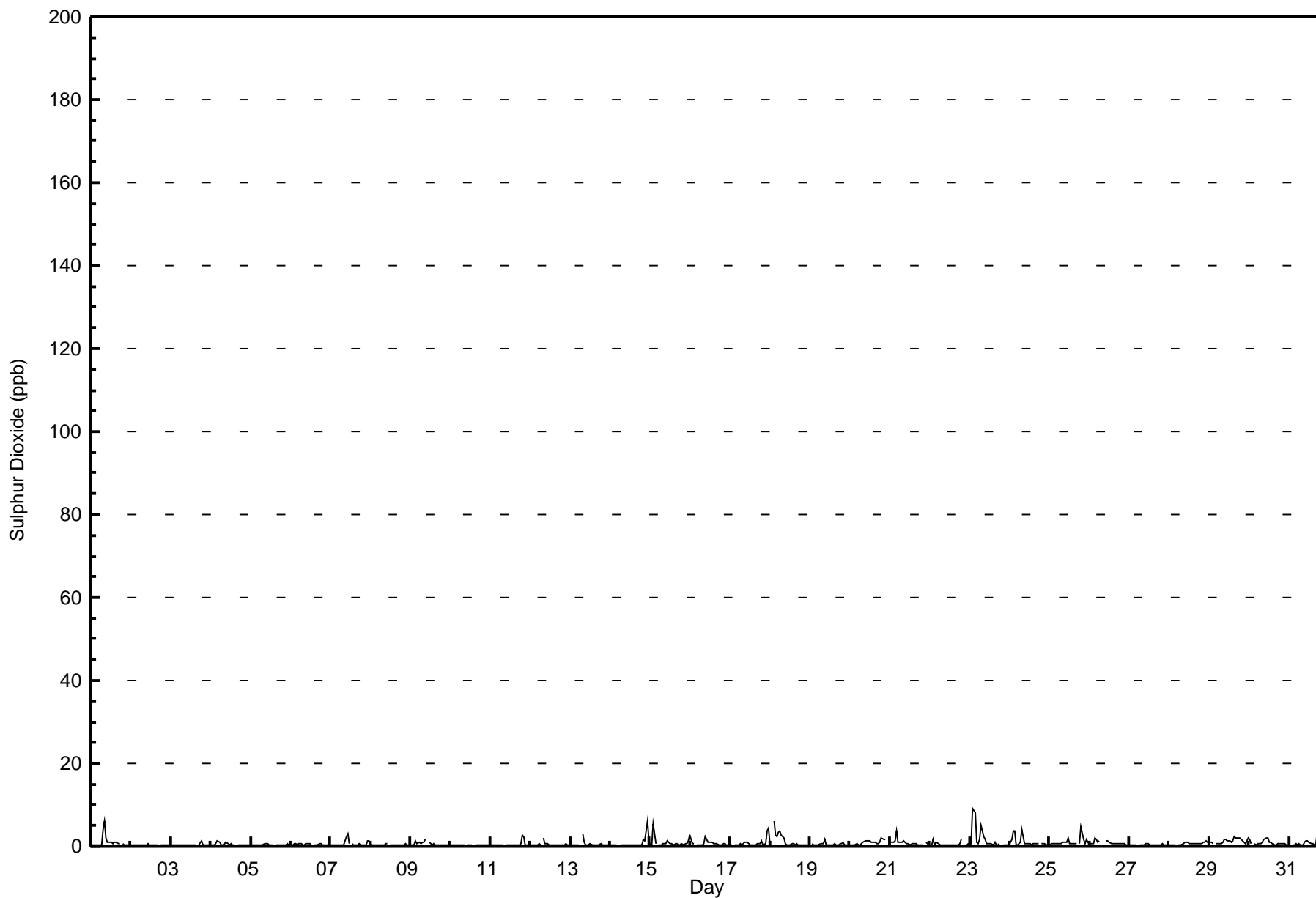
C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

# Hourly Averages for SO<sub>2</sub> at Smoky Heights August 2009



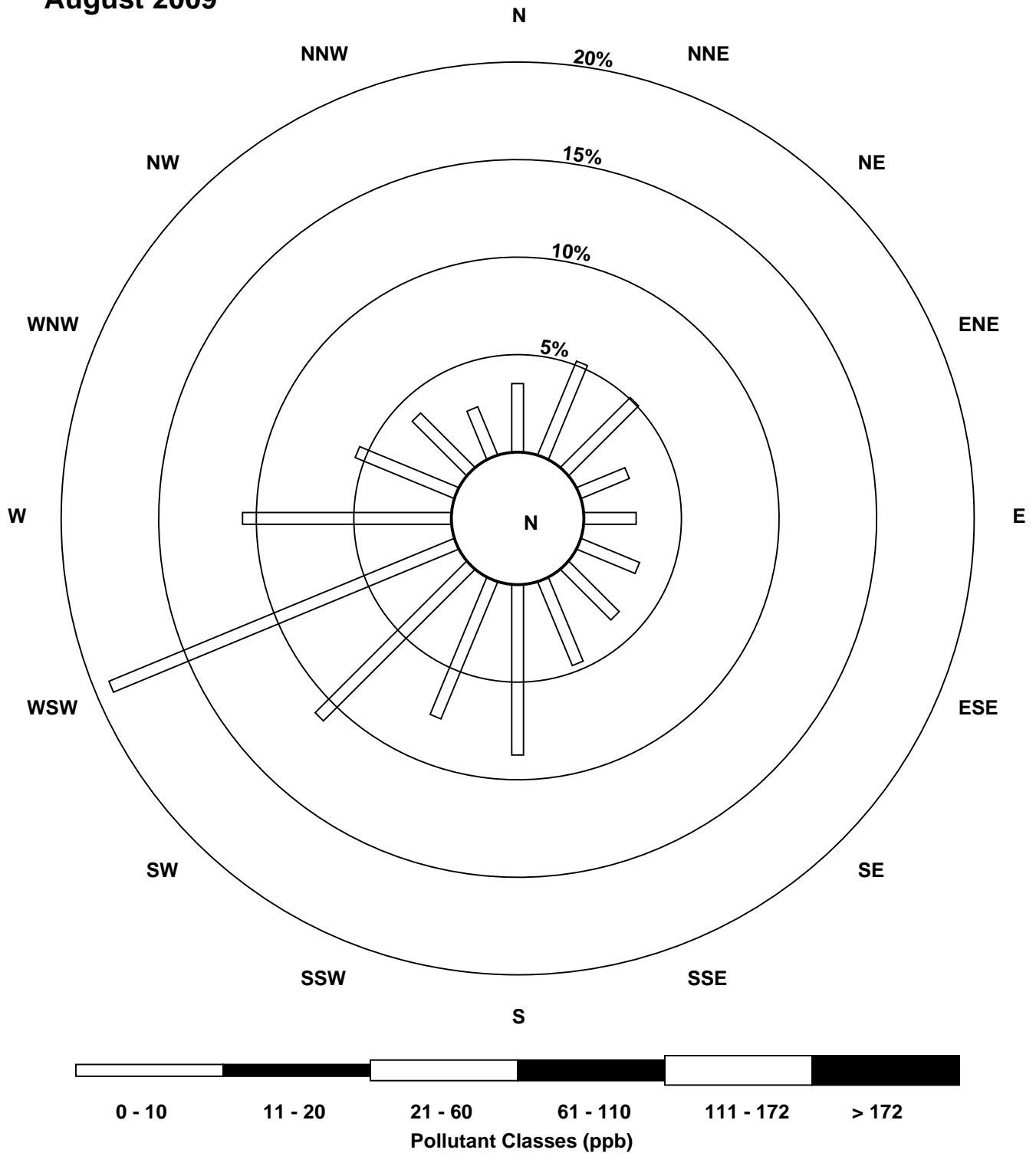


# Hourly Maximums for SO<sub>2</sub> at Smoky Heights August 2009



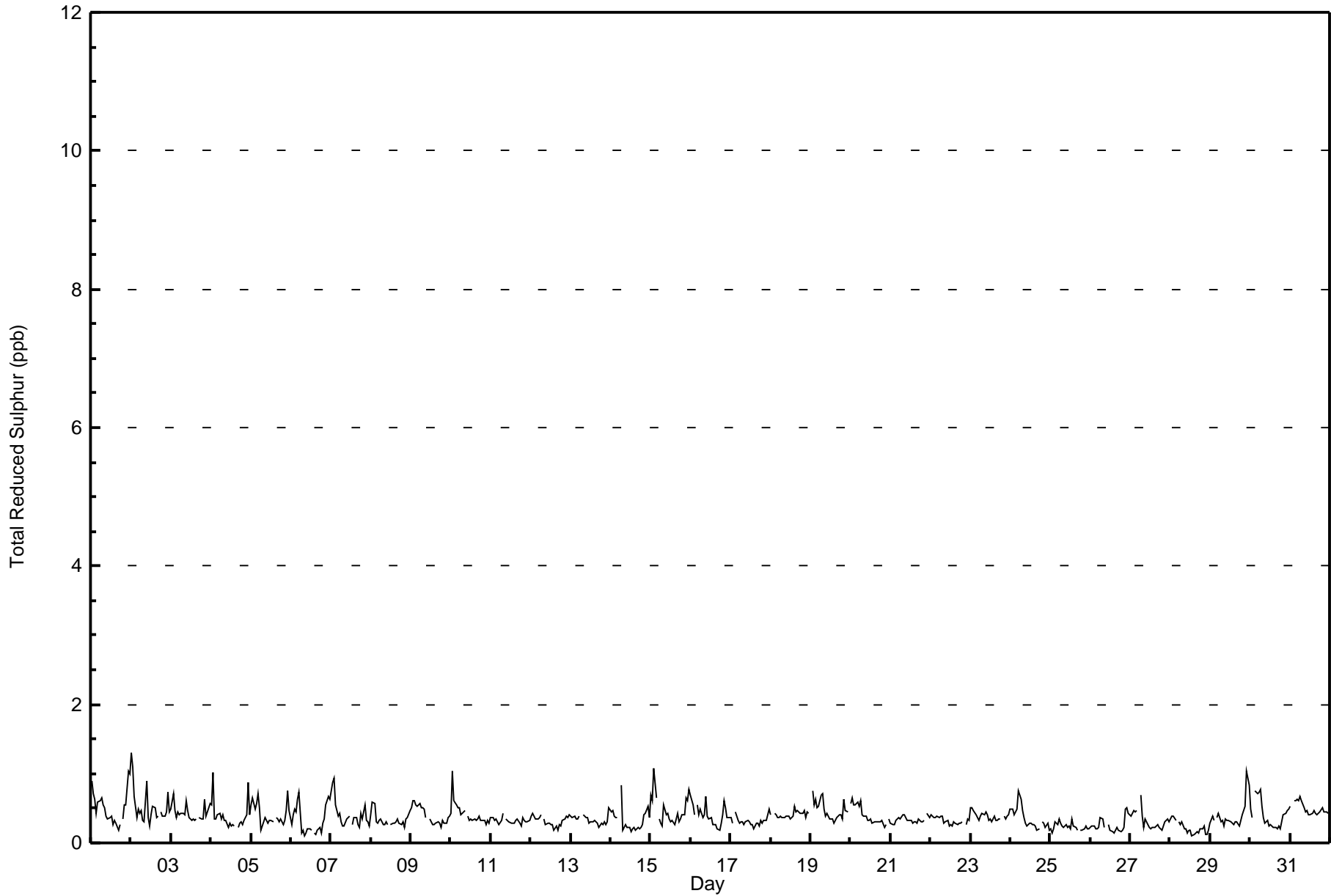


# Pollutant Rose for SO<sub>2</sub> at Smoky Heights August 2009



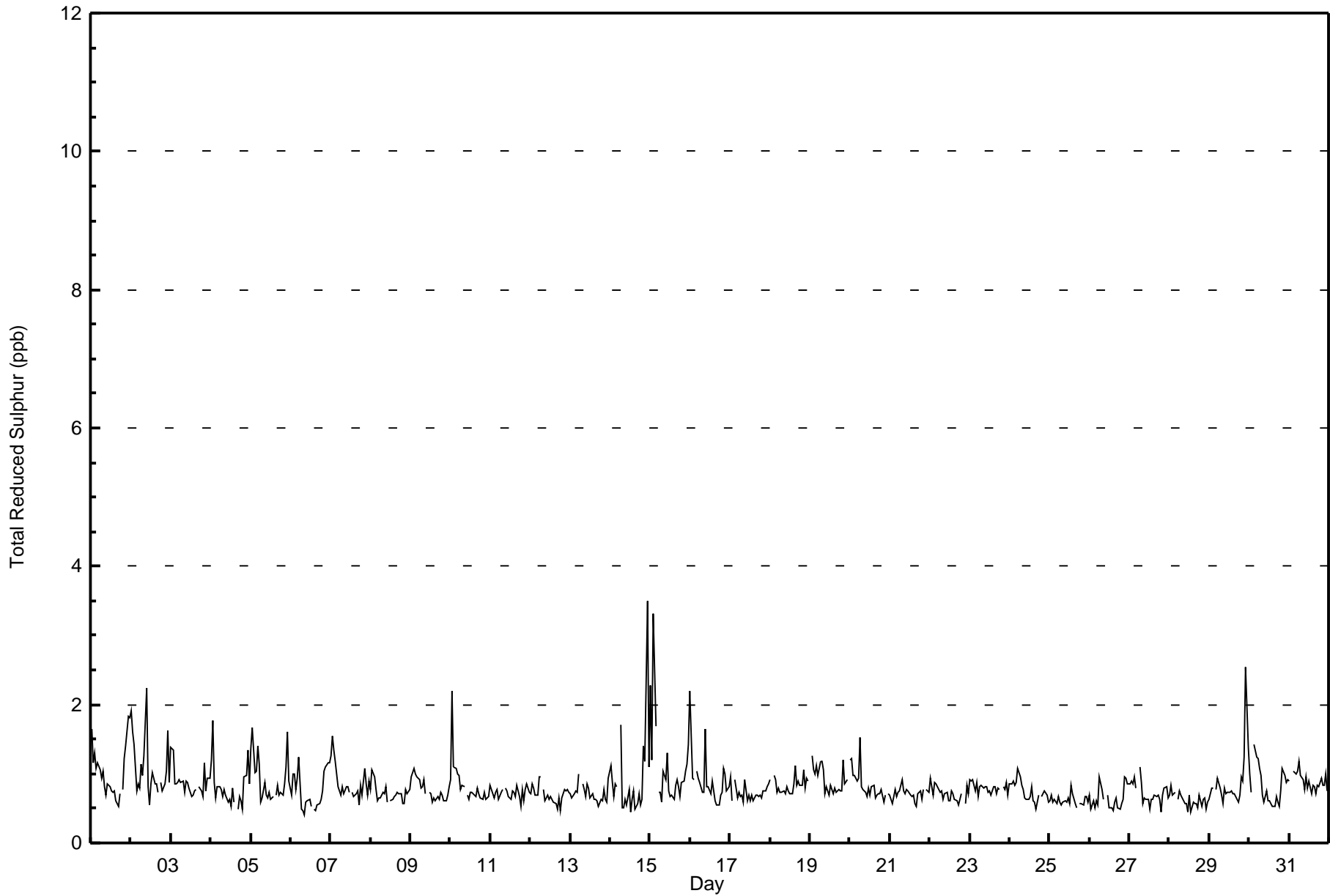


# Hourly Averages for TRS at Smoky Heights August 2009

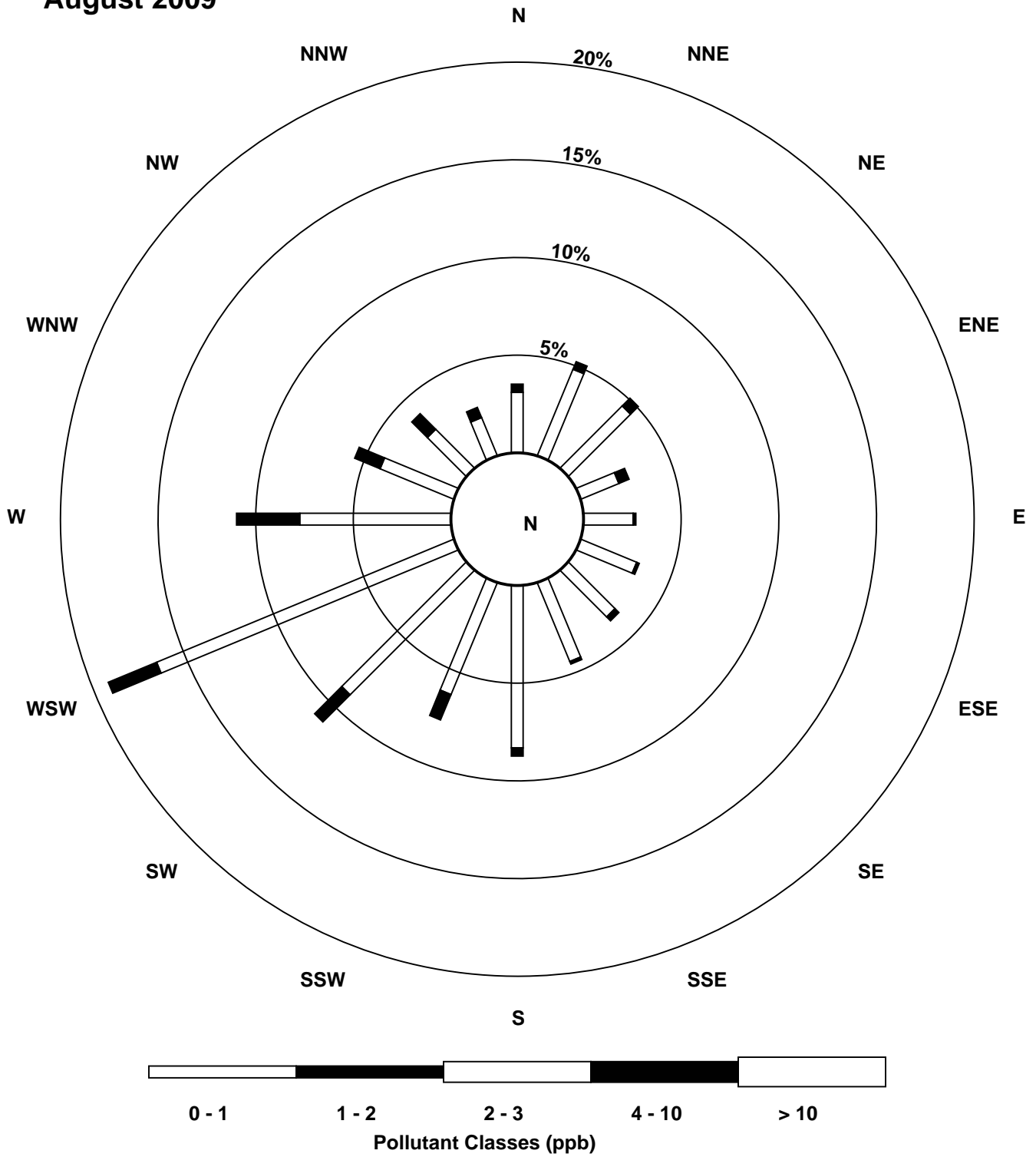




# Hourly Maximums for TRS at Smoky Heights August 2009



# Pollutant Rose for TRS at Smoky Heights August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

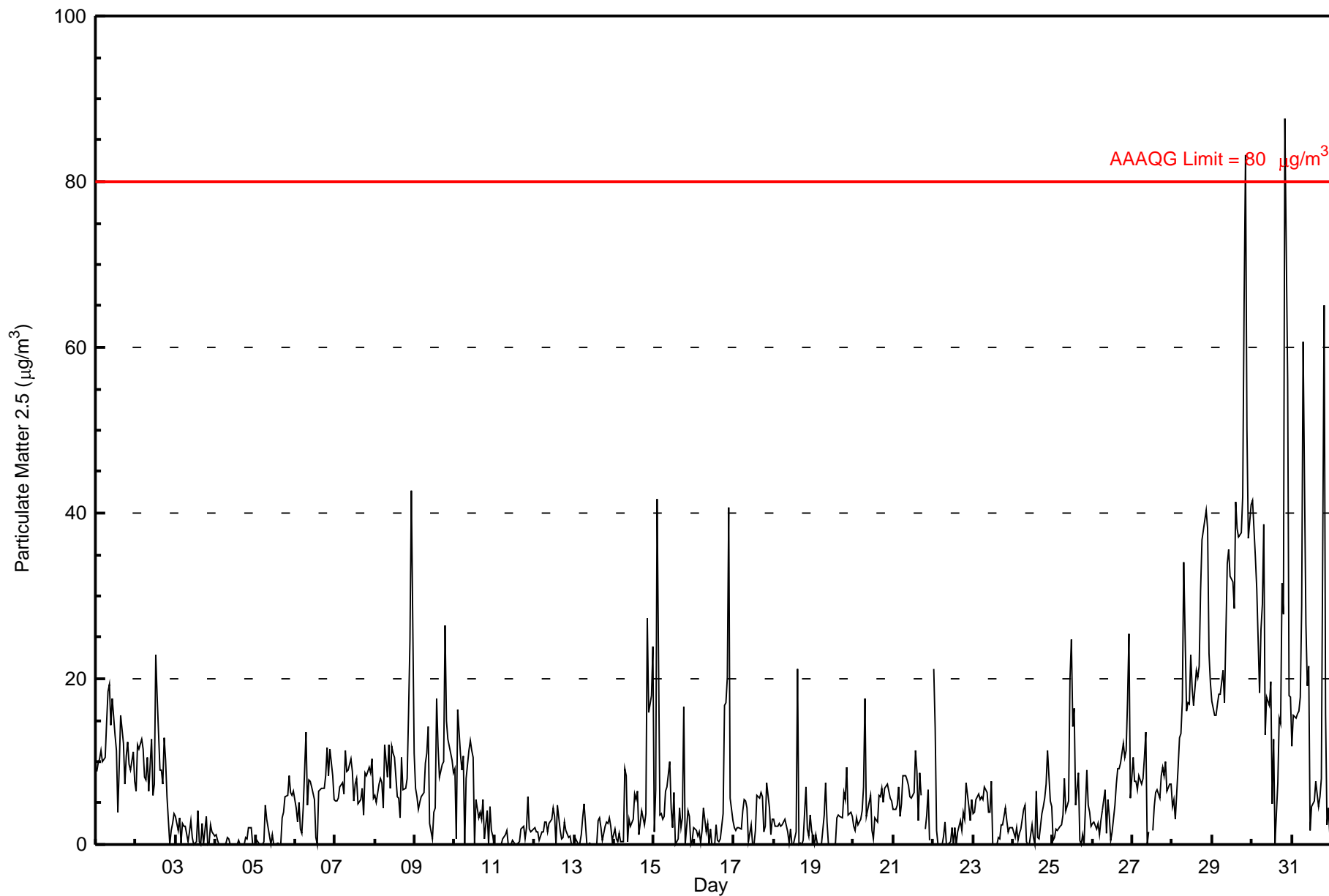
**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAO): 1-hr: 2 24-hr: 1	Hours in Service: 744
Maximum Value: 87.6 µg/m <sup>3</sup> on Aug 30 21:00	Maximum Daily Average: 33.4 µg/m <sup>3</sup> on Aug 29
Minimum Value: 0 µg/m <sup>3</sup> on Aug 2 21:00	Hours of Data: 740
Maximum Diurnal Average: 13.9 µg/m <sup>3</sup> at hour 21	Hours of Missing Data: 4
Monthly Average: 7.42 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.4 µg/m <sup>3</sup> on Aug 4	Percent Operational Time: 99.5
Minimum Diurnal Average: 5.0 µg/m <sup>3</sup> at hour 5	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 1.5 Median = 4.4 Q <sub>3</sub> = 9.0 P <sub>90</sub> = 17.7 P <sub>99</sub> = 44.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	9	10	10	11	10	11	15	19	19	14	18	13	11	4	10	16	12	7	11	12	10	9	11	8	11.6	19.2																						
2-Aug	6	12	12	13	12	8	8	11	6	13	6	7	23	18	9	9	7	13	10	6	0	2	3	4	9.0	22.8																						
3-Aug	3	2	3	0	2	2	2	0	1	3	1	0	0	4	0	0	3	0	3	0	0	2	2	1	1.5	4.0																						
4-Aug	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0.4	2.0																						
5-Aug	0	1	0	0	0	0	5	3	1	0	1	0	0	0	0	0	3	4	6	6	8	6	6	6	2.4	8.3																						
6-Aug	4	3	5	2	1	4	14	5	8	8	7	5	1	0	6	7	7	7	8	12	8	11	8	5	6.1	13.6																						
7-Aug	5	5	6	7	7	6	11	9	9	10	9	5	7	8	5	5	7	4	9	8	9	9	10	6	7.4	11.4																						
8-Aug	6	5	7	8	7	4	12	8	12	7	12	11	11	6	6	3	10	7	7	8	16	25	43	11	10.4	42.8																						
9-Aug	7	6	4	5	6	6	10	11	14	3	1	4	4	18	12	8	10	10	26	15	13	11	10	9	9.2	26.4																						
10-Aug	9	1	16	11	9	11	0	8	11	12	11	10	0	5	3	4	3	5	1	4	0	5	2	1	6.0	16.2																						
11-Aug	0	0	0	0	0	1	1	2	0	BD	0	1	0	0	0	0	2	2	1	2	6	2	1	2	1.0	5.7																						
12-Aug	2	2	2	1	2	2	3	3	2	3	3	4	3	0	5	2	1	1	3	2	1	1	0	0	1.8	4.7																						
13-Aug	0	1	0	0	1	3	5	0	0	0	0	0	0	0	3	3	2	0	1	2	3	2	3	2	1	1.4	4.9																					
14-Aug	2	1	0	1	0	0	9	8	0	3	2	3	6	5	6	1	4	3	2	4	27	16	18	24	6.2	27.2																						
15-Aug	1	7	42	4	4	3	3	6	7	10	4	2	6	0	1	4	2	3	17	0	4	3	0	0	5.6	41.7																						
16-Aug	2	2	1	2	0	2	4	1	3	0	2	0	0	2	0	0	1	4	17	17	20	41	6	3	5.4	40.7																						
17-Aug	2	2	2	2	2	4	5	5	4	0	2	0	0	2	6	6	6	6	2	2	7	4	1	3	3.2	7.5																						
18-Aug	3	2	2	3	2	2	3	3	2	0	2	0	0	2	21	0	0	0	0	7	2	1	4	2	2.6	21.3																						
19-Aug	0	1	0	0	0	0	4	7	3	0	0	0	0	0	3	4	3	3	6	5	9	4	4	3	2.5	9.4																						
20-Aug	2	2	3	2	3	4	7	18	3	5	6	2	1	3	3	6	6	7	5	7	7	6	6	5	4.9	17.7																						
21-Aug	4	4	5	7	3	5	8	8	8	7	6	6	11	9	3	9	6	BD	2	4	7	1	BD	5.8	11.4																							
22-Aug	21	14	2	0	0	0	1	3	0	0	0	2	0	2	0	2	3	2	4	3	7	5	3	5	3.3	21.3																						
23-Aug	4	4	5	6	5	6	5	7	6	4	4	8	0	0	0	1	1	2	2	4	3	2	2	2	3.5	7.6																						
24-Aug	2	1	2	1	1	2	4	5	0	0	0	2	1	0	6	1	1	4	5	6	7	11	5	5	3.0	11.3																						
25-Aug	1	1	2	2	2	2	4	8	4	5	20	25	14	16	5	9	1	0	1	0	9	5	4	2	5.9	24.7																						
26-Aug	3	3	2	2	1	3	4	7	1	5	3	0	1	5	7	9	9	10	12	10	11	17	25	6	6.6	25.5																						
27-Aug	10	8	8	7	8	7	8	11	14	0	1	BD	2	5	6	7	6	8	9	8	10	6	7	7	7.1	13.5																						
28-Aug	5	5	3	9	13	13	17	34	16	17	17	23	19	17	21	20	22	31	37	39	40	38	23	20	20.8	40.4																						
29-Aug	17	16	16	17	18	18	21	17	25	34	36	32	32	28	41	38	37	38	42	66	83	50	37	41	33.4	83.3																						
30-Aug	42	38	35	31	18	26	29	39	13	18	17	20	5	13	0	7	15	15	32	28	88	56	18	18	25.8	87.6																						
31-Aug	12	16	15	16	16	18	29	61	27	19	22	2	5	5	8	6	5	6	8	65	16	2	4	1	15.9	65.0																						
																								6.0	5.5	6.8	5.4	5.0	5.6	8.1	10.5	7.1	6.7	6.8	6.3	5.1	5.8	6.6	5.8	6.3	6.6	9.6	11.4	13.9	11.7	8.6	6.7	Diurnal Average
																								41.6	38.2	41.7	30.8	18.4	25.9	29.0	60.7	26.6	34.0	35.6	32.4	31.7	28.5	41.3	38.2	37.2	37.5	42.1	65.7	87.6	56.1	42.8	41.0	Diurnal Maximum

BD - Baseline Drift  
 Alberta Ambient Air Quality Guideline (AAAQ): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAO): 24-hr 30 µg/m<sup>3</sup>

# Hourly Averages for PM<sub>2.5</sub> at Smoky Heights August 2009



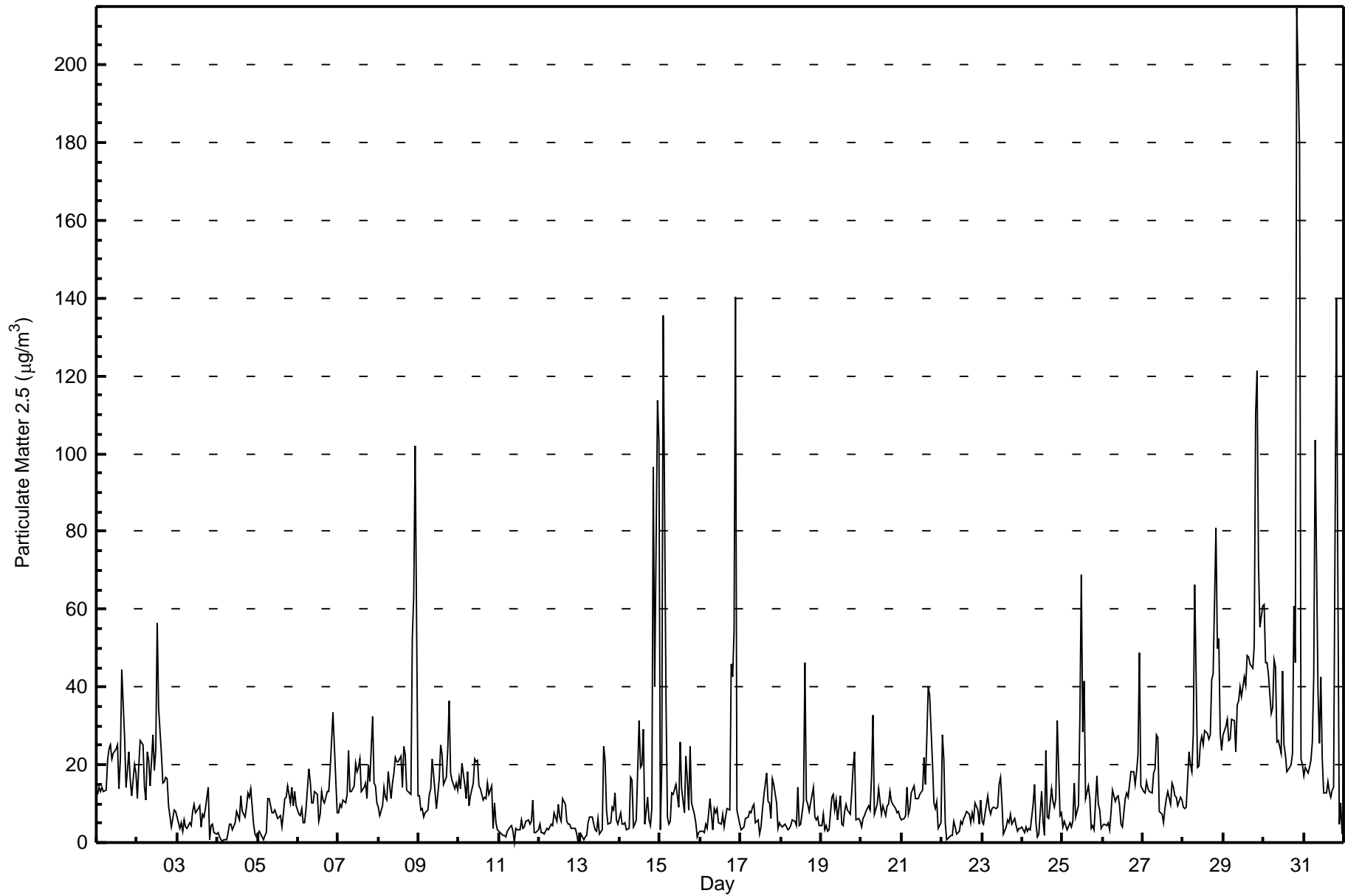


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

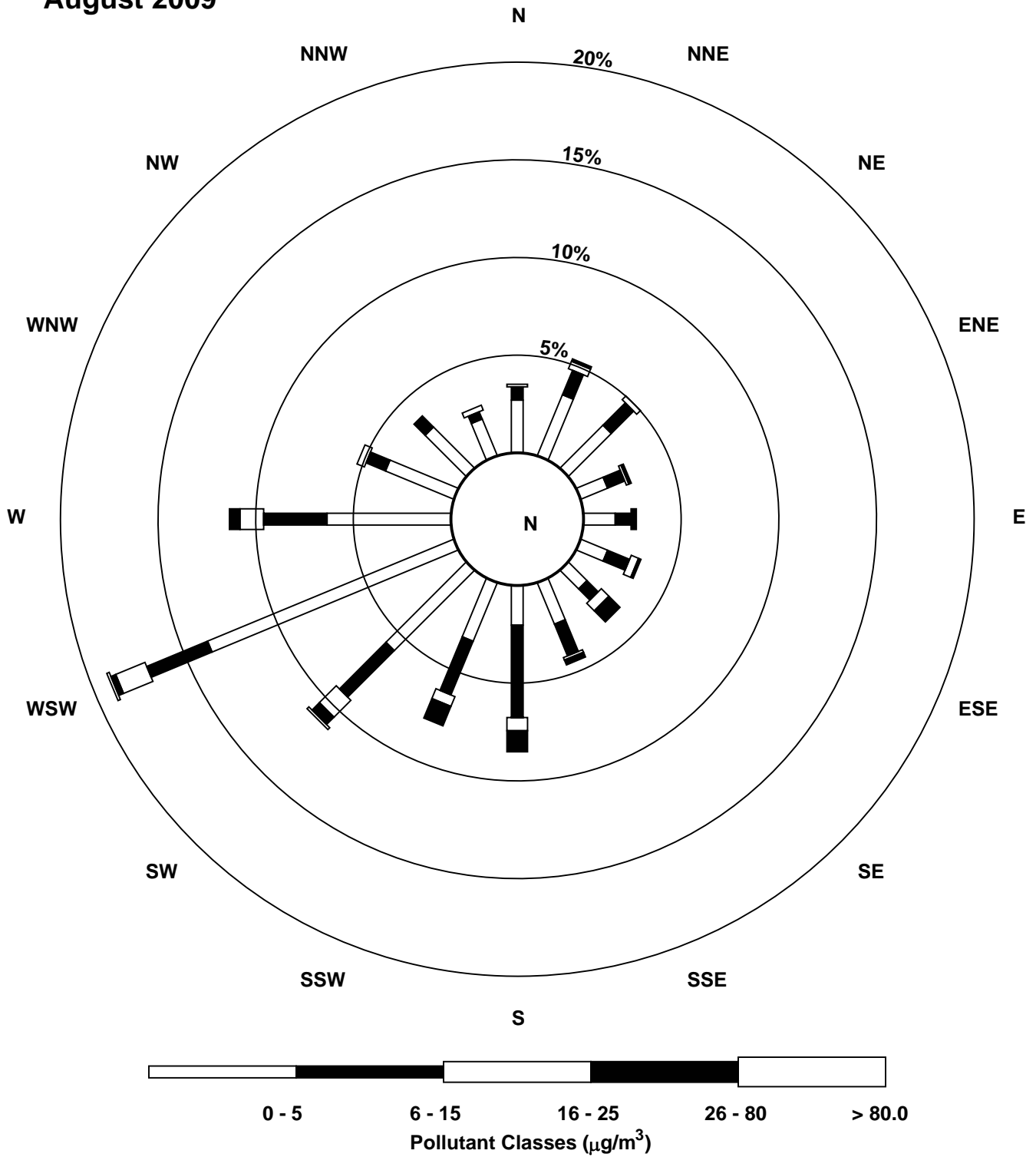
**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

Maximum Value: 214.6 µg/m <sup>3</sup> on Aug 30 21:00		Maximum Daily Average: 47.8 µg/m <sup>3</sup> on Aug 30		Hours in Service: 744																						
Minimum Value: 0 µg/m <sup>3</sup> on Aug 11 10:00		Minimum Daily Average: 3.7 µg/m <sup>3</sup> on Aug 11		Hours of Data: 744																						
Maximum Diurnal Average: 30.7 µg/m <sup>3</sup> at hour 21		Minimum Diurnal Average: 8.6 µg/m <sup>3</sup> at hour 5		Hours of Missing Data: 0																						
Monthly Average: 15.31 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 5.2 Median = 10.1 Q <sub>3</sub> = 17.8 P <sub>90</sub> = 28.6 P <sub>99</sub> = 106.5		Hours of Calibration: 0																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	12	14	13	14	13	13	21	24	25	21	23	24	25	14	21	44	27	14	19	23	16	12	20	18	19.7	44.3
2-Aug	11	20	26	25	14	11	23	21	15	28	19	24	56	35	22	15	16	17	16	10	4	6	8	8	18.8	56.3
3-Aug	7	3	5	3	6	4	4	5	4	8	10	8	9	10	4	7	7	9	14	1	4	5	3	2	5.8	14.2
4-Aug	3	1	1	0	1	1	3	5	5	3	5	8	7	6	12	8	7	9	13	12	14	5	2	1	5.4	13.7
5-Aug	2	3	1	1	2	2	11	11	8	8	8	7	6	7	4	7	11	12	14	10	14	9	13	10	7.6	14.5
6-Aug	7	7	9	5	5	9	19	16	10	10	13	13	6	7	13	11	10	13	13	19	26	33	16	8	12.4	33.4
7-Aug	8	10	9	11	10	12	24	13	13	14	21	18	19	22	13	14	15	11	20	16	33	15	14	10	15.2	32.6
8-Aug	9	7	10	14	12	11	18	11	15	18	22	21	21	22	14	25	22	14	13	12	53	64	102	12	22.5	102.0
9-Aug	12	8	9	7	8	8	13	14	21	18	9	12	16	25	23	15	17	24	36	18	16	14	15	13	15.5	36.4
10-Aug	17	14	20	15	11	18	10	12	15	22	21	21	15	14	11	12	11	15	13	15	4	10	5	3	13.5	21.5
11-Aug	3	2	2	2	1	3	4	4	3	0	4	3	3	6	4	5	6	5	5	5	11	3	3	3	3.7	10.8
12-Aug	5	3	3	2	3	3	4	5	4	8	6	10	7	6	11	10	5	5	5	4	4	4	2	0	4.8	11.3
13-Aug	0	2	1	1	2	5	7	6	5	3	3	6	2	3	25	21	9	5	5	9	8	13	6	5	6.4	24.7
14-Aug	8	5	5	5	3	4	17	16	4	5	6	31	19	20	29	5	12	6	4	9	97	40	114	103	23.5	113.6
15-Aug	3	19	136	36	7	5	5	13	13	15	12	9	26	14	8	22	16	9	25	10	7	5	2	2	17.4	135.7
16-Aug	3	3	2	5	4	7	11	3	9	8	9	5	5	7	4	7	9	8	46	43	54	140	8	5	16.9	140.4
17-Aug	3	4	4	6	6	8	7	9	10	5	6	2	4	8	12	18	11	10	6	16	15	10	4	5	7.9	18.0
18-Aug	5	4	5	4	3	4	4	6	5	4	14	4	5	11	46	11	10	8	10	14	6	6	7	4	8.4	46.4
19-Aug	4	7	3	5	3	3	12	12	8	11	6	12	5	4	8	10	9	7	13	19	23	6	6	5	8.4	23.2
20-Aug	4	6	7	8	10	9	17	33	7	10	14	10	7	9	7	10	10	13	11	10	9	8	8	7	10.1	33.0
21-Aug	6	6	7	14	7	9	13	15	11	11	11	12	13	22	15	27	40	38	20	10	9	10	4	5	14.0	40.1
22-Aug	28	21	5	1	1	2	2	5	4	2	3	6	5	6	7	8	7	5	8	6	10	8	5	11	6.9	27.5
23-Aug	6	5	7	12	9	7	9	9	9	9	15	17	10	2	4	6	5	7	5	6	4	3	4	4	7.2	16.8
24-Aug	4	3	4	3	4	3	10	15	5	1	2	13	6	2	24	7	6	14	11	9	11	31	7	8	8.4	31.5
25-Aug	4	5	5	3	5	4	6	15	7	9	33	69	28	41	11	15	11	4	4	3	17	10	8	4	13.4	68.8
26-Aug	4	5	4	5	3	8	13	10	12	12	9	5	4	11	13	12	15	18	18	15	18	23	49	15	12.5	48.7
27-Aug	13	13	16	14	13	13	18	19	28	27	8	7	5	9	11	13	10	15	14	12	12	10	12	11	13.4	27.7
28-Aug	9	9	9	23	20	18	28	66	19	20	26	27	25	29	28	27	28	42	43	81	50	53	28	24	30.5	80.9
29-Aug	28	30	32	26	27	32	31	23	35	37	40	37	43	40	48	48	46	45	51	110	121	72	55	61	46.6	121.2
30-Aug	61	46	46	43	33	35	47	45	26	26	23	44	25	22	18	19	20	23	61	46	215	179	21	20	47.8	214.6
31-Aug	17	19	18	19	21	26	43	103	39	25	43	21	13	13	16	13	12	14	14	140	68	5	10	2	29.7	139.9
		9.8	9.8	13.7	10.8	8.6	9.6	14.6	18.3	12.7	12.9	14.3	16.4	14.2	14.4	15.7	15.1	14.1	14.1	17.7	23.0	30.7	26.1	18.1	12.5	Diurnal Average
		61.4	46.3	135.7	43.3	33.0	34.6	47.0	103.3	38.7	36.6	42.6	68.8	56.3	41.4	48.2	47.8	45.8	45.0	60.8	139.9	214.6	178.6	113.6	103.0	Diurnal Maximum

# Hourly Maximums for PM<sub>2.5</sub> at Smoky Heights August 2009



# Pollutant Rose for PM<sub>2.5</sub> at Smoky Heights August 2009

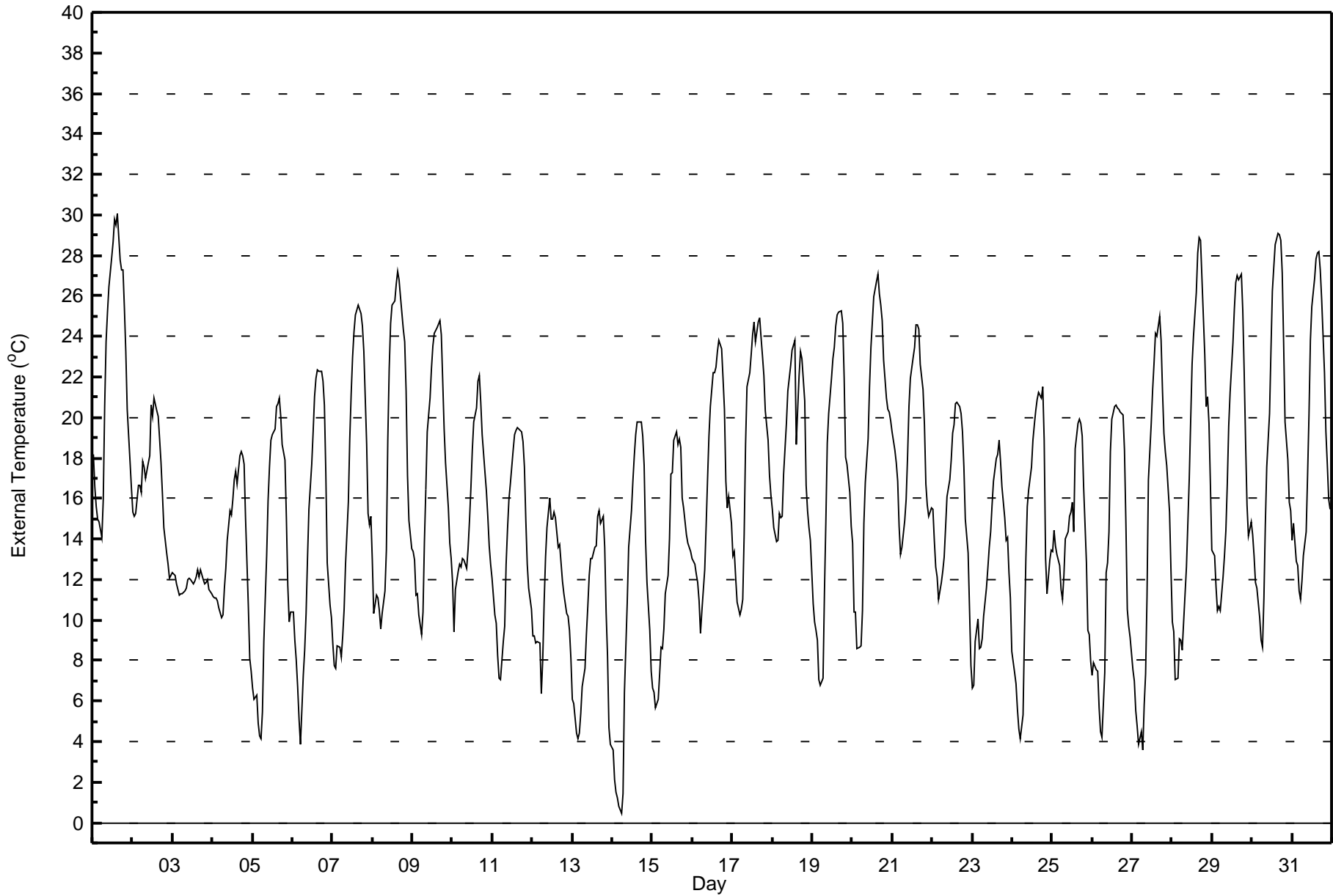


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Smoky Heights - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

Maximum Value: 30.1 °C on Aug 1 16:00		Maximum Daily Average: 22.4 °C on Aug 1		Hours in Service: 744																							
Minimum Value: 0 °C on Aug 14 06:00		Minimum Daily Average: 9.6 °C on Aug 13		Hours of Data: 744																							
Maximum Diurnal Average: 22.3 °C at hour 17		Minimum Diurnal Average: 8.9 °C at hour 6		Hours of Missing Data: 0																							
Monthly Average: 15.63 °C		Percentiles: P <sub>1</sub> = 3.6 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 11.3 Median = 15.1 Q <sub>3</sub> = 20.1 P <sub>90</sub> = 24.1 P <sub>99</sub> = 28.7		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	18	17	16	15	15	14	16	21	24	25	26	28	29	30	30	30	28	27	27	25	23	20	18	17	22.4	30.1	
2-Aug	15	15	15	17	17	16	18	18	17	18	18	21	20	21	20	20	19	18	16	15	13	13	12	12	16.8	20.9	
3-Aug	12	12	12	12	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11.8	12.5	
4-Aug	11	11	11	11	11	10	10	12	13	14	15	15	16	17	17	17	18	18	18	18	15	11	8	7	13.5	18.3	
5-Aug	7	6	6	5	4	4	5	9	13	16	18	19	19	19	21	21	21	20	19	18	15	12	10	10	13.2	20.9	
6-Aug	10	9	8	7	5	4	7	8	10	13	15	18	19	21	22	22	22	22	22	21	17	13	11	10	14.1	22.4	
7-Aug	9	8	8	9	9	8	9	11	13	16	19	21	23	24	25	26	25	25	24	23	19	15	15	15	16.6	25.5	
8-Aug	13	10	11	11	10	10	10	11	13	19	22	25	26	26	27	27	27	26	24	24	21	17	15	14	18.3	27.2	
9-Aug	13	13	11	11	10	9	10	14	16	19	21	22	24	24	24	24	25	24	22	19	18	16	14	13	17.4	24.8	
10-Aug	12	9	11	12	13	13	13	13	13	14	15	16	18	20	20	22	22	21	19	17	16	15	14	13	15.5	22.0	
11-Aug	12	10	10	8	7	7	9	10	13	15	16	17	18	19	19	20	19	19	19	18	15	13	12	11	13.9	19.5	
12-Aug	9	9	9	9	9	6	8	11	13	15	16	15	15	15	14	14	13	12	11	10	10	10	8	8	11.5	16.0	
13-Aug	6	6	4	4	4	5	7	8	9	11	12	13	13	14	14	15	15	15	14	10	8	5	4	4	9.6	15.4	
14-Aug	4	2	2	1	1	0	1	6	9	11	14	15	17	18	19	20	20	20	19	18	14	12	9	8	10.8	19.8	
15-Aug	7	6	6	6	7	9	9	10	11	12	14	17	17	19	19	19	19	18	16	16	14	14	14	13	13.0	19.3	
16-Aug	13	13	12	12	11	9	10	12	15	17	19	21	22	22	22	23	24	23	22	20	17	16	16	15	17.0	23.8	
17-Aug	13	13	12	11	10	11	11	14	19	21	22	23	24	25	24	25	25	24	23	22	20	19	17	16	18.5	24.9	
18-Aug	15	15	14	14	15	15	15	17	20	21	22	23	23	24	19	20	22	23	23	21	17	15	15	14	18.4	23.8	
19-Aug	11	10	10	9	7	7	7	11	15	19	20	22	23	23	24	25	25	25	25	22	18	18	16	15	17.0	25.2	
20-Aug	14	10	10	9	9	9	10	15	17	19	22	23	25	26	27	27	26	26	25	23	21	20	20	20	18.8	27.1	
21-Aug	19	18	18	17	15	13	14	15	16	18	21	22	23	23	25	25	24	23	21	20	17	16	15	16	18.8	24.6	
22-Aug	15	14	13	12	11	12	12	13	15	16	17	18	19	20	21	21	21	20	19	18	15	13	11	8	15.5	20.7	
23-Aug	7	7	9	10	9	9	9	10	12	13	14	14	16	17	18	18	19	18	17	15	14	14	12	11	12.9	18.9	
24-Aug	8	7	7	6	5	4	5	9	13	16	16	18	19	20	20	21	21	21	22	19	13	11	13	13	13.6	21.5	
25-Aug	13	14	14	13	13	12	11	12	14	14	15	15	16	14	18	20	20	20	19	17	13	9	9	8	14.3	19.9	
26-Aug	7	8	8	7	6	4	4	7	12	13	14	18	20	21	21	20	20	20	20	18	15	11	10	9	13.1	20.6	
27-Aug	8	7	6	5	4	5	4	6	7	11	17	20	21	23	24	24	25	24	21	19	18	18	15	12	14.3	25.0	
28-Aug	10	9	7	7	9	9	8	10	13	15	17	20	23	24	26	28	29	29	27	23	21	21	20	17	17.5	28.9	
29-Aug	13	13	12	10	11	10	12	13	14	17	20	21	24	25	27	27	27	27	25	22	19	16	14	15	18.1	27.0	
30-Aug	14	13	12	12	10	9	9	11	15	18	20	23	26	27	29	29	29	29	27	24	20	18	16	15	18.9	29.1	
31-Aug	14	15	13	13	11	11	12	13	14	17	20	24	25	27	28	28	28	27	26	22	19	18	16	15	19.1	28.2	
		11.4	10.7	10.1	9.8	9.3	8.9	9.7	11.7	13.8	15.9	17.7	19.3	20.5	21.3	21.8	22.2	22.3	21.9	20.9	19.1	16.4	14.6	13.3	12.4	Diurnal Average	
		19.3	18.4	17.7	16.9	16.6	16.3	17.9	20.6	23.7	25.2	26.4	27.9	28.6	29.8	29.5	30.1	29.1	28.8	27.3	25.4	23.2	21.0	20.2	19.9	Diurnal Maximum	

# Hourly Averages for External Temperature at Smoky Heights August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

Smoky Heights  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

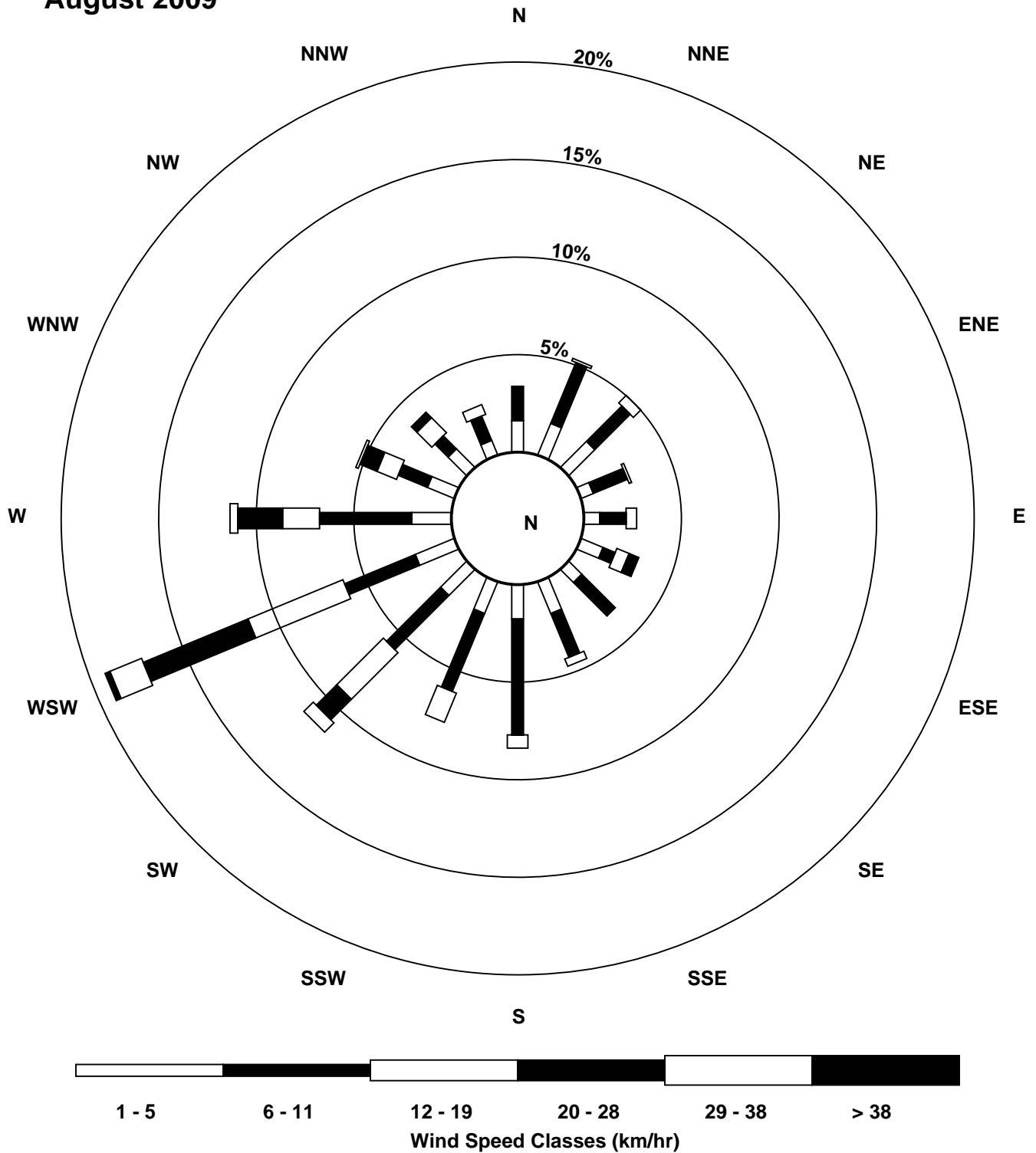
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	6	7	7	8	8	7	6	10	2	6	16	17	16	16	15	15	16	11	7	6	3	4	4	5	3.8	16.6
Dir	233	231	196	209	203	209	225	246	69	278	295	314	312	312	318	347	39	52	71	101	80	19	286	285	302.8	314.4
2 Spd	6	5	7	5	8	6	20	8	13	6	8	5	13	13	14	11	14	11	11	12	2	6	3	2.9	20.1	
Dir	270	250	213	168	166	176	287	288	235	283	358	55	12	34	37	51	36	28	28	35	66	56	266	351	5.4	287.0
3 Spd	2	4	3	3	5	6	10	10	7	6	9	10	9	7	6	7	5	4	9	7	9	10	9	8	4.8	10.0
Dir	244	37	27	79	19	27	48	67	59	57	61	44	59	32	7	1	344	45	342	338	306	319	291	309	15.6	319.3
4 Spd	6	5	8	9	9	11	9	10	10	10	9	7	7	6	9	8	7	7	6	6	4	5	4	5	6.7	10.7
Dir	334	319	341	348	354	4	8	21	25	46	27	16	24	32	16	32	40	44	41	7	2	339	314	340	11.6	4.0
5 Spd	3	0	2	3	2	3	2	3	4	4	6	8	9	6	7	7	8	10	8	10	7	1	4	4	3.2	10.2
Dir	335	138	307	325	352	62	81	30	42	45	61	92	113	84	95	154	125	134	135	154	167	201	161	177	112.7	134.3
6 Spd	6	5	5	5	5	5	8	10	7	8	9	10	6	4	6	9	9	10	8	4	2	6	5	5	5.0	10.5
Dir	176	212	229	229	277	223	197	183	182	177	175	163	152	192	174	177	169	147	146	144	103	338	279	273	182.1	151.5
7 Spd	4	1	5	7	8	7	8	9	7	8	10	13	9	8	5	6	8	9	10	6	2	4	5	3	5.4	12.5
Dir	286	310	254	234	233	214	189	183	176	171	176	168	170	174	150	127	177	144	172	165	119	24	134	180	178.2	168.4
8 Spd	4	6	7	11	12	10	10	9	10	15	18	24	26	30	26	25	26	31	21	16	12	11	11	13	14.3	30.7
Dir	285	273	232	220	196	202	198	184	182	213	231	269	262	261	275	264	265	246	244	239	250	265	263	267	247.4	246.2
9 Spd	14	4	10	14	4	7	8	7	7	12	20	17	20	22	17	14	17	20	16	12	10	10	3	4	10.5	21.9
Dir	267	261	262	269	271	271	255	242	201	228	242	247	253	252	246	229	227	235	187	185	169	171	174	202	235.3	251.6
10 Spd	3	6	7	6	3	4	18	17	14	5	15	20	26	24	19	23	22	26	20	16	26	22	27	19	15.0	26.5
Dir	243	252	250	257	350	225	285	292	279	201	209	220	233	241	227	236	241	230	228	226	250	241	240	241	241.3	240.4
11 Spd	16	14	16	14	13	15	12	9	19	26	31	35	35	38	40	42	38	35	34	28	17	15	15	15	23.2	42.3
Dir	244	231	231	208	207	214	214	215	218	225	221	221	230	246	246	243	244	242	249	251	237	231	230	236	234.1	242.8
12 Spd	15	16	17	19	18	11	13	17	23	22	17	17	20	25	23	21	20	17	17	14	13	9	9	7	13.9	24.8
Dir	248	238	236	239	243	247	239	245	256	254	284	300	294	301	299	304	315	323	313	330	336	329	321	318	281.8	301.3
13 Spd	8	8	5	5	4	3	3	5	5	5	5	7	8	5	6	4	6	5	3	5	7	5	4	2	3.0	8.1
Dir	301	308	261	266	258	274	47	3	35	38	4	15	346	315	359	2	30	52	40	84	73	98	347	287	359.0	301.4
14 Spd	5	4	3	4	2	3	5	5	6	7	9	11	6	7	5	6	5	5	11	8	4	1	2	4	3.5	10.8
Dir	260	252	272	288	294	259	198	166	162	159	169	184	175	168	136	107	159	147	131	143	148	101	285	280	174.2	184.4
15 Spd	7	3	1	4	7	3	5	5	3	6	7	6	6	1	11	14	12	12	8	8	11	10	11	12	6.3	14.4
Dir	252	257	130	242	214	221	185	184	233	203	265	257	302	112	295	273	277	299	245	255	262	260	260	250	257.4	273.0
16 Spd	11	11	7	10	9	7	9	9	13	8	7	7	5	7	9	6	10	11	6	5	7	12	13	13	8.1	13.1
Dir	250	242	230	233	229	215	207	211	239	247	219	243	245	282	283	295	260	274	270	244	233	241	246	229	243.3	245.7
17 Spd	12	12	11	8	11	11	7	11	16	30	28	29	30	33	25	24	26	24	27	28	20	17	18	17	18.4	33.0
Dir	219	213	229	220	207	208	201	192	235	256	256	252	254	271	277	277	279	276	257	253	241	237	236	247	250.6	270.8
18 Spd	20	21	21	20	23	20	18	24	28	29	30	24	24	23	19	19	20	18	11	7	5	7	8	9	15.8	29.7
Dir	258	261	263	262	258	258	260	256	264	273	283	290	292	295	330	314	320	317	332	17	359	6	22	0	286.0	283.4
19 Spd	3	8	10	6	6	3	0	1	3	5	7	6	7	7	4	4	4	5	5	7	6	5	1	2	1.9	10.2
Dir	261	290	267	301	248	314	202	176	183	167	150	144	173	196	154	186	210	159	78	80	64	128	181	237	188.3	267.2
20 Spd	3	6	5	4	3	2	3	5	5	7	9	11	19	19	22	20	21	20	17	15	13	14	16	16	8.8	21.7
Dir	236	272	268	300	292	326	17	31	43	55	55	86	90	95	120	114	115	109	109	103	87	94	110	117	99.3	120.3
21 Spd	14	9	9	3	7	7	8	11	11	11	5	3	9	14	18	13	15	17	26	20	13	16	19	28	6.0	28.4
Dir	113	106	97	45	22	11	338	313	351	340	3	169	188	166	183	235	223	253	243	215	248	216	237	234	229.6	233.9
22 Spd	27	20	21	26	16	20	23	24	24	34	37	37	36	32	32	33	28	24	26	20	15	15	6	3	23.6	36.6
Dir	235	248	253	242	251	246	240	239	238	240	238	233	235	238	242	240	236	248	253	258	279	288	231	233	243.4	238.2

**Peace Airshed Zone Association  
Summary of Hourly Averages**

Smoky Heights  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	8	10	15	5	8	4	7	11	8	11	12	14	16	21	27	26	28	28	23	21	15	24	16	15	14.1	28.3
Dir	276	284	290	272	169	228	264	264	239	220	203	165	202	234	239	258	250	249	250	240	237	244	243	238	241.6	249.2
24 Spd	11	11	11	9	11	10	11	16	19	23	20	20	18	17	16	13	9	9	3	5	3	4	5	4	9.8	22.9
Dir	240	247	249	257	261	263	280	254	256	261	260	260	276	262	256	257	252	276	354	25	79	109	122	116	259.4	261.4
25 Spd	6	8	6	6	5	6	6	4	4	9	14	13	21	3	6	21	27	26	23	16	8	10	12	14	6.9	26.8
Dir	73	55	40	41	60	27	27	7	118	192	214	260	270	298	202	245	240	243	249	258	258	244	249	266	251.7	240.1
26 Spd	12	11	14	12	10	7	12	11	11	11	10	6	9	10	12	9	8	7	7	5	5	6	9	7	6.8	13.7
Dir	257	211	253	275	210	213	266	273	260	165	162	175	180	177	195	188	187	178	161	166	326	272	257	233	219.4	253.5
27 Spd	6	5	5	4	6	4	5	4	6	6	5	7	7	5	4	4	3	6	6	8	11	9	6	5	2.6	10.6
Dir	202	237	232	227	196	209	221	212	184	169	142	150	181	171	143	167	113	95	58	62	64	72	40	17	145.7	63.9
28 Spd	5	5	4	3	3	8	6	10	11	12	12	7	6	9	7	8	8	9	8	4	6	10	9	4	4.3	11.9
Dir	18	14	1	311	217	190	233	235	188	178	187	182	130	117	129	137	123	127	96	68	80	129	135	165	149.6	187.5
29 Spd	1	4	3	7	7	7	6	8	10	8	7	8	6	6	5	3	4	6	6	3	6	8	8	10	4.5	10.3
Dir	252	265	253	255	249	225	220	188	194	191	187	208	230	220	205	134	107	130	141	190	247	273	266	269	218.6	193.8
30 Spd	8	7	6	6	6	6	6	6	10	12	12	15	19	17	19	19	15	12	9	8	3	4	7	8	9.2	19.0
Dir	185	199	192	179	225	202	218	206	210	213	226	226	235	238	233	233	238	243	181	168	222	247	266	271	223.2	235.3
31 Spd	8	9	9	2	1	3	3	3	5	5	3	7	9	9	8	9	9	10	7	5	8	7	6	8	2.9	9.8
Dir	264	268	257	246	357	50	210	200	182	206	200	47	23	43	24	37	13	16	37	33	18	16	7	10	6.9	15.5
Spd	6.1	5.7	6.2	6.0	5.1	4.5	5.3	5.6	6.3	7.5	7.7	7.2	8.1	7.7	7.1	7.5	7.1	6.4	5.2	3.9	2.8	3.7	5.2	5.6	Diurnal Average	
Dir	247.8	251.0	251.4	249.2	236.4	236.5	247.8	241.4	233.2	230.8	235.4	236.7	244.6	251.1	252.4	253.1	249.6	247.6	236.1	229.3	255.7	250.3	248.5	252.6	Diurnal Maximum	
Spd	26.5	21.1	21.4	25.8	22.6	20.3	23.3	23.7	27.8	33.5	36.6	36.6	36.4	37.8	40.3	42.3	37.5	35.1	34.4	28.4	25.5	24.3	26.5	28.4	Diurnal Maximum	
Dir	235.2	261.4	262.6	241.8	258.5	257.8	240.2	255.5	264.4	239.8	238.2	233.1	234.8	246.0	245.7	242.8	243.8	242.4	249.0	253.2	250.4	244.0	240.4	233.9	Diurnal Maximum	
Maximum Speed Value: 42 km/h on Aug 11 16:00																		Minimum Speed Value: 0 km/h on Aug 5 02:00						Hours in Service: 744		
Maximum Daily Speed Average: 23.6 km/h on Aug 22																		Minimum Daily Speed Average: 1.9 km/h on Aug 19						Hours of Data: 744		
Maximum Diurnal Speed Average: 8.1 km/h at hour 13																		Minimum Diurnal Speed Average: 2.8 km/h at hour 21						Hours of Missing Data: 0		
Monthly Average Velocity: 5.92 km/h 244.48 deg																		Speed Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 3.7 Q <sub>1</sub> = 5.6 Median = 8.4 Q <sub>3</sub> = 14.5 P <sub>90</sub> = 22.1 P <sub>99</sub> = 36.3						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	20	37	1	0	0	0	58																			
NorthEast	18	43	9	0	0	0	70																			
East	12	18	6	2	0	0	38																			
SouthEast	14	30	2	3	0	0	49																			
South	21	82	11	0	0	0	114																			
SouthWest	25	56	61	32	16	2	192																			
West	23	60	38	41	11	0	173																			
NorthWest	13	14	15	8	0	0	50																			
Total	146	340	143	86	27	2	744																			

# Wind Rose for WS at Smoky Heights August 2009





**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Smoky Heights - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 43 km/h on Aug 11 16:00	Maximum Daily Speed Average: 24.4 km/h on Aug 22	Hours in Service: 744
Minimum Speed: 2 km/h on Aug 15 03:00	Minimum Daily Speed Average: 6.1 km/h on Aug 13	Hours of Data: 744
Maximum Diurnal Speed Average: 15.7 km/h at hour 13	Minimum Diurnal Speed Average: 8.0 km/h at hour 6	Hours of Missing Data: 0
Monthly Average Speed: 11.47 km/h	Percentiles: P <sub>1</sub> = 2.4 P <sub>10</sub> = 4.4 Q <sub>1</sub> = 6.5 Median = 9.0 Q <sub>3</sub> = 14.8 P <sub>90</sub> = 22.6 P <sub>99</sub> = 36.8	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	6	7	8	8	9	8	7	10	5	10	16	17	17	16	17	16	11	8	7	4	5	5	5	9.9	17.3	
2-Aug	6	6	7	7	8	10	21	13	15	7	10	7	8	13	13	14	11	14	12	11	12	5	8	4	10.1	21.1
3-Aug	4	4	4	4	5	6	10	10	7	7	9	10	10	8	6	8	6	6	9	7	9	10	9	8	7.3	10.4
4-Aug	6	5	8	9	9	11	9	10	11	10	10	8	8	7	9	9	8	7	6	6	4	5	4	5	7.7	10.7
5-Aug	4	3	3	3	2	4	3	3	5	5	7	9	10	8	8	9	11	11	10	10	7	2	4	4	6.1	10.8
6-Aug	7	5	5	6	5	5	8	10	7	8	9	10	11	8	7	8	10	10	10	8	4	3	6	6	7.3	11.2
7-Aug	4	3	6	7	8	7	8	9	7	9	10	13	10	9	8	7	9	10	11	6	3	4	6	4	7.4	12.8
8-Aug	4	7	7	11	12	10	10	9	10	16	19	24	26	30	26	26	26	31	21	16	12	11	11	13	16.2	31.0
9-Aug	14	6	10	14	7	7	8	7	8	12	21	18	21	23	18	15	18	20	16	12	10	10	3	4	12.6	23.4
10-Aug	4	6	7	7	4	7	18	17	14	6	16	20	26	25	19	24	22	26	21	17	26	22	27	19	16.6	26.6
11-Aug	16	14	16	14	13	15	12	9	19	26	31	35	35	38	41	43	38	35	35	28	17	15	15	15	23.9	42.7
12-Aug	15	16	17	19	18	11	13	17	23	23	18	17	20	25	23	22	20	18	17	15	13	9	9	7	16.9	25.1
13-Aug	8	8	5	5	5	4	4	5	6	6	6	8	9	7	8	7	8	6	4	6	7	6	4	3	6.1	8.7
14-Aug	5	4	4	4	3	3	5	6	6	7	9	11	8	9	8	8	8	8	11	8	4	2	3	5	6.3	11.5
15-Aug	7	4	2	5	7	6	5	6	5	7	8	7	8	8	12	15	13	12	8	9	11	10	11	12	8.4	15.4
16-Aug	11	11	7	10	9	7	10	9	13	9	7	9	8	9	10	8	11	11	6	5	7	12	13	13	9.4	13.1
17-Aug	12	12	11	8	11	12	7	11	16	31	28	29	31	33	25	25	26	24	27	29	20	17	18	17	20.1	33.5
18-Aug	20	21	21	21	23	20	18	24	28	30	30	25	25	24	19	19	20	18	12	7	5	7	8	9	18.9	30.0
19-Aug	7	8	11	7	6	6	2	2	4	6	7	7	9	10	7	7	7	7	7	7	6	6	4	4	6.4	10.9
20-Aug	3	6	5	4	3	2	4	5	6	7	9	12	19	20	22	21	21	20	17	15	13	15	17	16	11.7	22.5
21-Aug	14	9	9	8	7	7	9	12	11	11	7	7	10	15	18	15	15	19	26	20	14	17	20	29	13.7	28.5
22-Aug	27	20	21	26	16	20	23	24	25	34	37	37	37	32	33	34	29	25	26	20	15	15	7	4	24.4	37.3
23-Aug	9	10	15	8	9	5	7	11	8	12	13	15	19	22	27	27	29	29	24	21	15	24	16	15	16.2	28.9
24-Aug	12	11	11	9	12	11	11	16	20	23	21	21	19	17	17	14	11	10	4	5	4	5	5	4	12.0	23.3
25-Aug	7	8	7	6	7	7	6	4	5	10	14	15	22	6	7	21	27	27	23	16	8	10	13	14	12.1	27.2
26-Aug	13	12	14	13	11	8	13	12	12	11	10	7	10	12	13	10	9	8	7	6	5	6	10	8	10.0	14.5
27-Aug	7	5	5	4	6	4	5	4	6	6	6	8	9	8	7	6	5	7	6	8	11	9	7	5	6.5	10.6
28-Aug	5	6	4	4	4	8	7	10	11	12	12	8	7	9	8	9	9	9	8	5	6	11	9	4	7.7	12.2
29-Aug	2	4	3	8	7	7	7	8	11	9	7	9	7	7	6	5	5	7	6	3	7	8	8	10	6.7	11.1
30-Aug	8	7	7	6	6	6	6	6	10	12	12	16	20	18	19	19	16	13	9	8	4	4	7	8	10.3	19.9
31-Aug	8	9	9	3	3	3	4	3	5	5	4	8	9	9	9	9	9	10	7	5	9	7	6	8	6.8	10.1
	8.9	8.3	8.7	8.7	8.3	8.0	9.0	9.8	10.9	12.5	13.8	14.4	15.7	15.6	15.2	15.5	15.3	15.1	13.4	11.1	9.4	9.4	9.4	9.1	Diurnal Average	
	26.6	21.1	21.5	25.9	22.6	20.3	23.4	23.7	28.1	33.8	36.9	37.3	36.9	38.5	40.6	42.7	38.1	35.5	34.6	28.6	25.6	24.5	26.6	28.5	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Smoky Heights - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 94.6 deg on Aug 31 05:00																								Hours in Service:	744
Minimum Value: 2.3 deg on Aug 18 06:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 3.1 P <sub>10</sub> = 5.7 Q <sub>1</sub> = 9.3 Median = 15.3 Q <sub>3</sub> = 28.0 P <sub>90</sub> = 50.4 P <sub>99</sub> = 81.8																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	17	17	16	18	13	23	22	17	77	80	16	16	16	17	24	28	13	11	25	19	32	43	24	23	79.9
2-Aug	16	13	19	45	25	58	40	77	29	33	42	43	77	14	12	11	9	6	14	13	8	79	40	80	80.0
3-Aug	57	24	28	51	26	13	12	11	10	17	14	19	14	29	23	20	19	51	16	10	11	6	6	10	56.8
4-Aug	18	11	6	8	7	7	8	9	11	16	22	28	29	40	23	21	27	25	31	10	17	15	14	6	40.4
5-Aug	37	84	59	35	65	51	33	32	22	29	32	38	30	43	45	62	60	22	45	18	14	56	24	18	83.9
6-Aug	24	26	12	25	18	25	8	6	12	20	18	23	22	52	78	62	34	28	15	4	17	40	5	14	77.5
7-Aug	48	70	26	15	5	13	5	8	10	13	15	12	27	31	70	42	31	24	12	19	37	55	40	45	70.1
8-Aug	35	18	11	8	6	13	7	8	7	20	14	12	12	8	11	13	12	9	5	5	10	4	5	4	34.9
9-Aug	3	54	14	10	67	20	8	11	25	20	11	17	14	21	20	25	17	13	10	10	8	4	54	34	66.9
10-Aug	37	12	7	40	56	82	13	7	9	41	15	8	9	11	12	12	15	11	12	12	4	7	4	4	81.8
11-Aug	8	5	8	7	8	8	7	10	8	8	9	8	9	11	7	8	10	8	6	5	4	3	3	4	11.0
12-Aug	5	6	4	4	4	5	5	7	7	13	19	10	13	9	13	9	12	12	11	12	9	12	10	9	19.1
13-Aug	8	4	18	10	14	37	27	26	26	39	49	37	29	54	49	62	43	48	42	15	17	64	26	65	64.5
14-Aug	9	9	22	20	34	16	15	17	16	19	22	20	62	52	58	45	60	79	14	11	28	92	53	29	92.4
15-Aug	8	62	45	56	15	60	17	42	57	27	18	35	54	88	26	22	26	9	15	19	3	3	3	3	87.5
16-Aug	4	6	5	8	6	16	8	10	14	36	32	50	75	50	41	52	33	17	28	7	8	6	4	13	74.9
17-Aug	5	8	10	7	9	14	9	13	7	7	9	8	10	10	10	12	9	9	8	7	6	5	8	4	13.8
18-Aug	4	3	5	5	3	2	3	3	7	8	7	15	11	16	11	7	14	11	22	10	10	12	18	29	28.8
19-Aug	79	19	20	56	47	66	91	87	33	37	36	42	44	47	70	65	68	48	62	6	17	37	78	53	91.1
20-Aug	26	15	15	13	22	40	22	10	22	17	15	24	10	12	15	13	10	7	7	5	8	12	7	9	40.3
21-Aug	11	15	11	73	29	21	29	19	15	20	42	86	34	18	13	26	18	30	6	11	13	13	10	5	86.3
22-Aug	4	6	4	5	6	6	5	6	8	7	7	11	9	10	12	11	12	10	7	8	4	7	37	39	38.7
23-Aug	16	7	3	64	24	36	22	5	20	18	21	11	32	14	12	11	14	10	8	4	5	7	5	3	64.2
24-Aug	6	6	5	14	7	6	12	3	11	11	16	14	19	18	21	24	31	27	28	10	18	17	12	24	30.7
25-Aug	20	15	18	13	43	14	25	35	43	21	14	38	34	74	54	13	10	9	7	7	10	16	12	9	74.0
26-Aug	24	24	19	12	31	31	11	23	31	10	17	39	23	30	22	22	23	18	12	62	8	22	5	32	62.4
27-Aug	20	25	13	17	10	10	15	23	12	18	32	28	43	58	72	71	66	26	8	7	6	7	21	31	71.7
28-Aug	15	11	19	27	24	7	31	10	14	10	13	40	25	18	23	26	20	12	7	30	16	22	11	19	40.3
29-Aug	57	27	30	10	11	13	31	18	21	16	24	26	31	40	48	69	35	31	9	23	15	3	9	7	69.1
30-Aug	13	15	21	17	9	16	9	6	9	9	11	12	17	16	13	13	16	13	17	6	31	15	7	7	31.3
31-Aug	5	4	9	49	95	37	64	28	13	18	39	46	22	18	26	20	22	14	15	25	10	7	8	7	94.6
78.9	83.9	59.2	72.8	94.6	81.8	91.1	87.2	76.8	79.9	49.0	86.3	77.1	87.5	77.5	71.4	67.9	79.2	61.6	62.4	37.3	92.4	78.3	80.0		

# PASZA

## Beaverlodge Station

### Monthly Summary Tables, Graphs and Roses

**Peace Airshed Zone Association  
Summary of Hourly Averages**

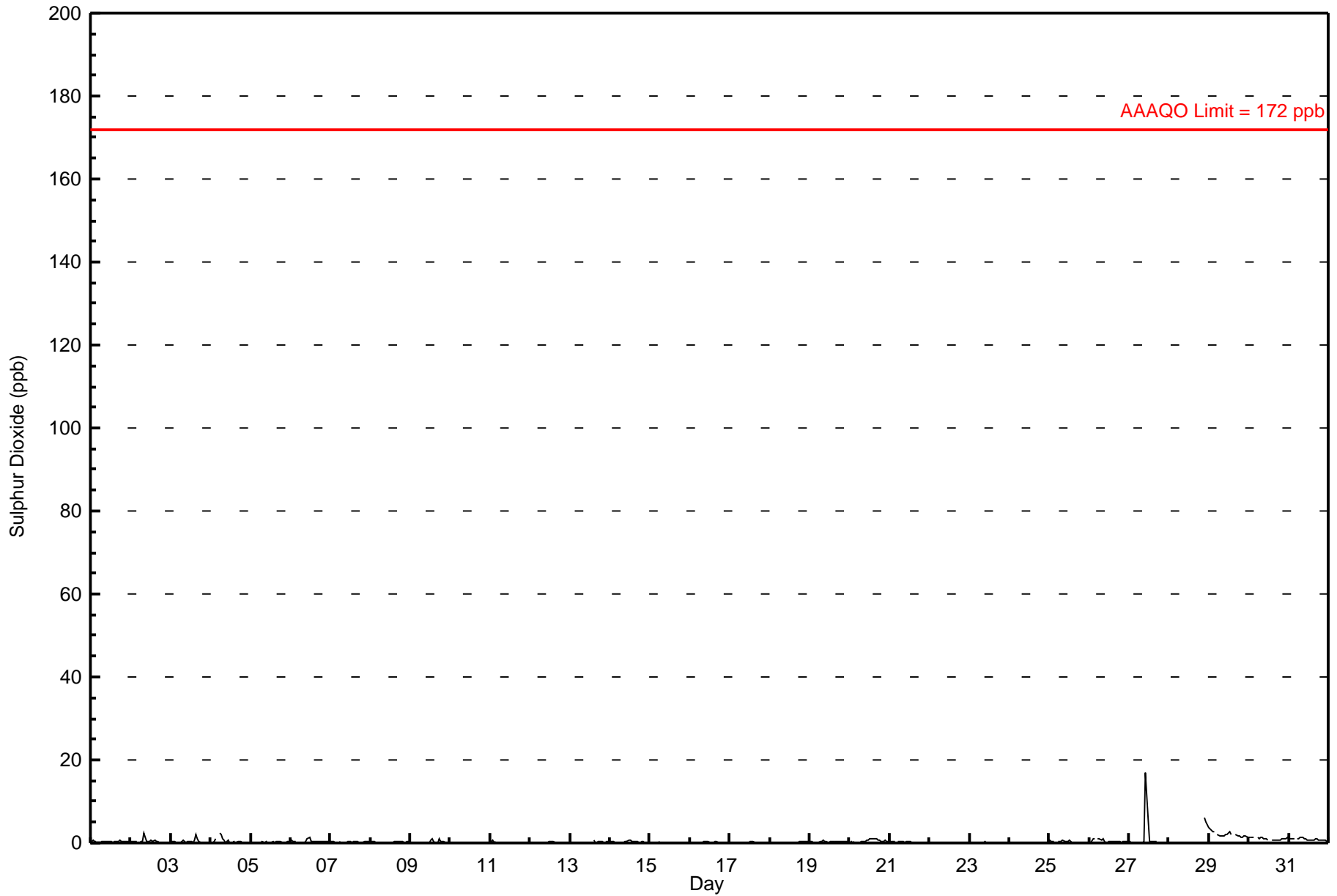
**Beaverlodge - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 17.0 ppb on Aug 27 11:00	Maximum Daily Average: 2.0 ppb on Aug 29
Minimum Value: 0 ppb on Aug 11 09:00	Hours of Data: 674
Maximum Diurnal Average: 0.9 ppb at hour 11	Hours of Missing Data: 70
Monthly Average: 0.37 ppb	Hours of Calibration: 43
Minimum Daily Average: 0.1 ppb on Aug 22	Percent Operational Time: 96.4
Minimum Diurnal Average: 0.2 ppb at hour 20	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.9	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.4	0.6	
2-Aug	0	0	0	0	A	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.3	2.3	
3-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0.3	1.9	
4-Aug	0	0	0	1	A	3	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5	
5-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
6-Aug	1	0	0	0	A	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5	
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0.2	1.2	
10-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
11-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7	
12-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
13-Aug	0	0	0	0	A	0	C	C	C	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	--	0.7	
14-Aug	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
15-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
16-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
18-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
19-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
20-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0.5	1.0	
21-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
25-Aug	1	0	0	0	A	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
26-Aug	0	0	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1	
27-Aug	0	0	0	0	A	0	0	0	0	0	17	6	0	0	0	0	0	N	N	N	N	N	N	N	--	17.0	
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	6	5	4	--	6.2
29-Aug	4	3	3	3	A	2	2	2	2	2	2	2	3	2	A	A	2	2	2	1	2	2	2	1	2.0	3.6	
30-Aug	1	1	1	1	A	1	1	1	1	1	1	1	C	C	1	1	1	1	1	1	1	1	1	1	1.0	1.5	
31-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5	
	0.4	0.3	0.3	0.4	--	0.4	0.3	0.3	0.4	0.3	0.9	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.4	Diurnal Average	
	3.6	3.0	2.8	2.6	--	2.5	2.1	1.6	2.3	1.9	17.0	5.6	2.5	1.9	1.0	1.9	2.0	1.9	1.8	1.4	1.5	6.2	5.1	4.3	Diurnal Maximum		

C - Calibration      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

# Hourly Averages for SO<sub>2</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

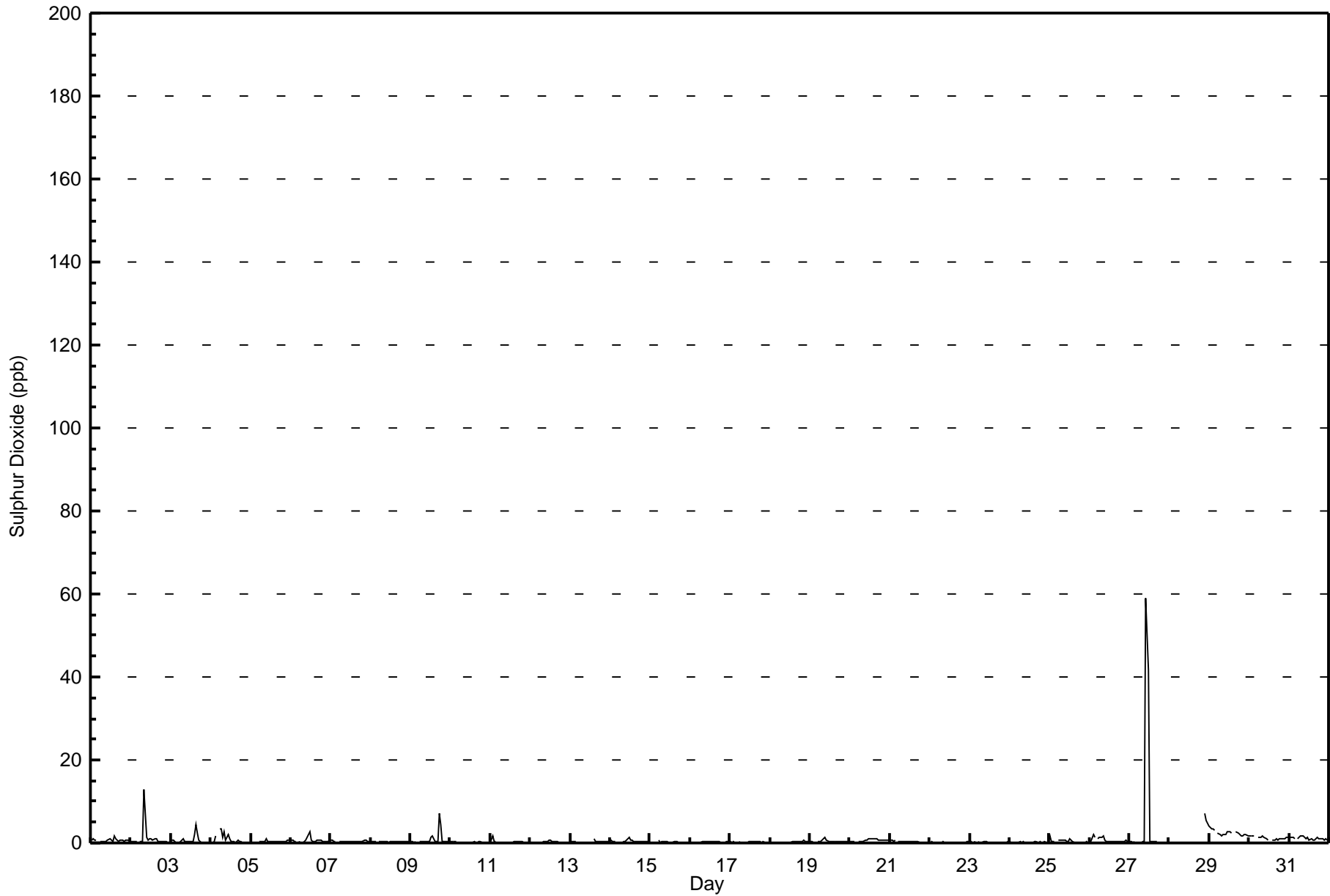
**Beaverlodge - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 59.0 ppb on Aug 27 11:00	Maximum Daily Average: 2.4 ppb on Aug 29	Hours in Service: 744
Minimum Value: 0 ppb on Aug 18 06:00	Minimum Daily Average: 0.1 ppb on Aug 22	Hours of Data: 674
Maximum Diurnal Average: 2.6 ppb at hour 11	Minimum Diurnal Average: 0.3 ppb at hour 20	Hours of Missing Data: 70
Monthly Average: 0.69 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.3 P <sub>99</sub> = 4.5	Hours of Calibration: 43
		Percent Operational Time: 96.4

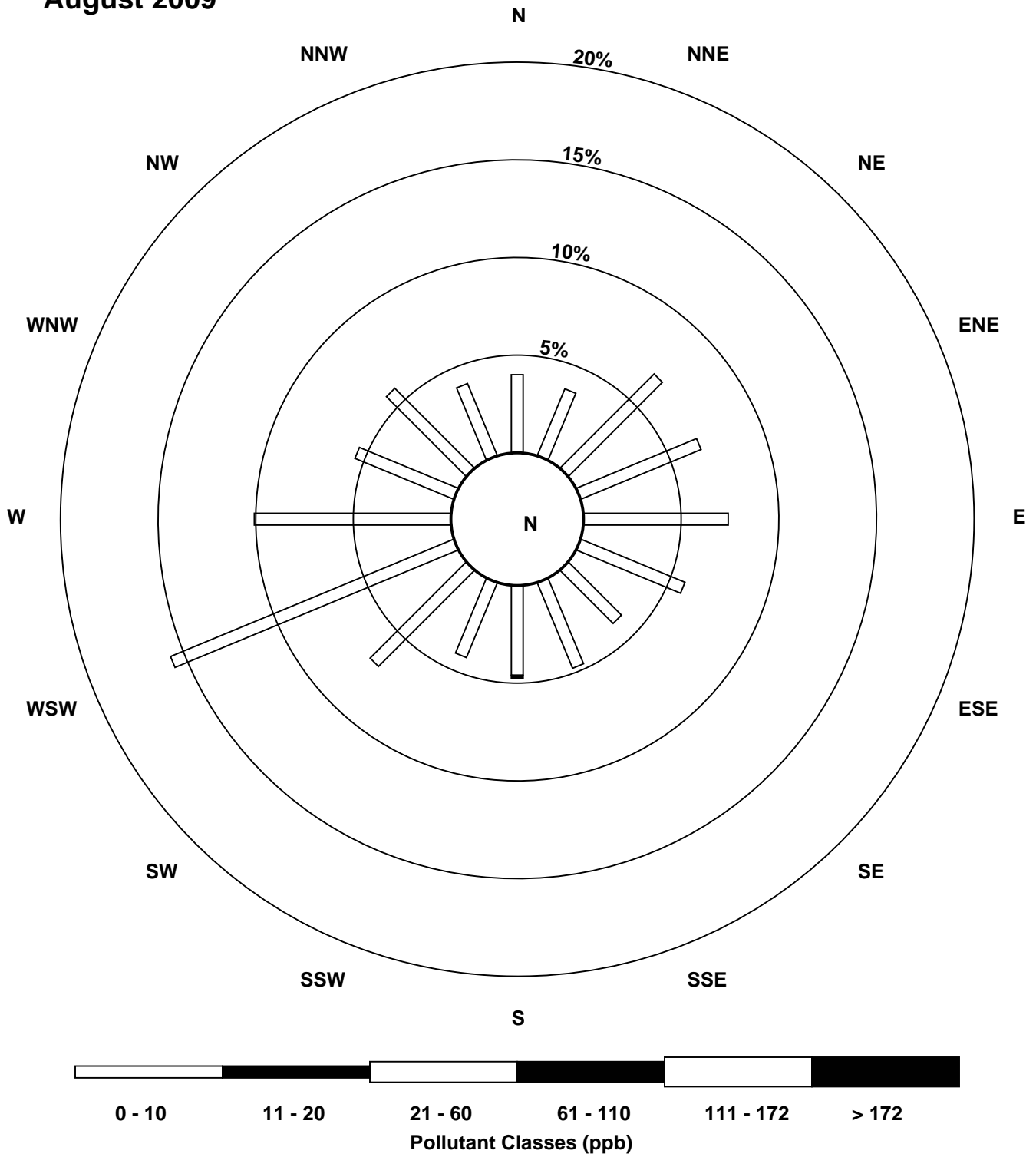
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	1	1	1	A	0	0	0	0	0	1	1	1	0	2	1	0	1	1	1	0	1	1	0	0.6	1.7	
2-Aug	0	0	0	0	A	0	0	0	13	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1.0	13.0	
3-Aug	1	1	0	0	A	0	0	1	0	0	0	0	0	0	2	5	3	1	0	0	0	0	0	0	0.7	4.5	
4-Aug	0	0	0	2	A	3	4	1	3	1	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0.9	3.5	
5-Aug	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.0	
6-Aug	1	1	1	0	A	0	0	0	0	1	1	3	1	0	0	0	1	1	1	0	0	0	0	1	0.6	2.8	
7-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.6	
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	2	1	0	0	7	4	0	0	0	0	0	0.8	7.1	
10-Aug	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
11-Aug	0	2	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.6	
12-Aug	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
13-Aug	0	0	0	0	A	0	C	C	C	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	--	0.9	
14-Aug	1	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
15-Aug	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
16-Aug	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
18-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.5	
19-Aug	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3	
20-Aug	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1	
21-Aug	1	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
25-Aug	2	0	0	0	A	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.7	
26-Aug	0	0	2	1	A	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.7	2.2	
27-Aug	0	0	0	0	A	0	0	0	0	0	59	42	0	0	0	0	0	N	N	N	N	N	N	N	--	59.0	
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	7	5	5	--	7.0
29-Aug	4	3	3	3	A	2	2	2	2	2	2	3	3	2	A	A	3	2	2	2	2	2	2	2	2.4	3.9	
30-Aug	2	2	2	2	A	1	1	1	2	1	1	1	C	C	1	1	1	1	1	1	1	1	1	1	1.2	1.8	
31-Aug	1	1	1	1	A	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7	
	0.6	0.5	0.5	0.5	--	0.5	0.5	0.5	1.0	0.5	2.6	2.0	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.3	0.3	0.6	0.6	0.5	Diurnal Average		
	3.9	3.3	3.3	2.9	--	3.4	3.5	1.7	13.0	2.1	59.0	41.7	2.8	2.5	2.2	4.5	2.6	7.1	4.3	1.6	1.7	7.0	5.5	4.7	Diurnal Maximum		

C - Calibration                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Maximums for SO<sub>2</sub> at Beaverlodge August 2009



# Pollutant Rose for SO<sub>2</sub> at Beaverlodge August 2009





**Peace Airshed Zone Association  
Summary of Hourly Averages**

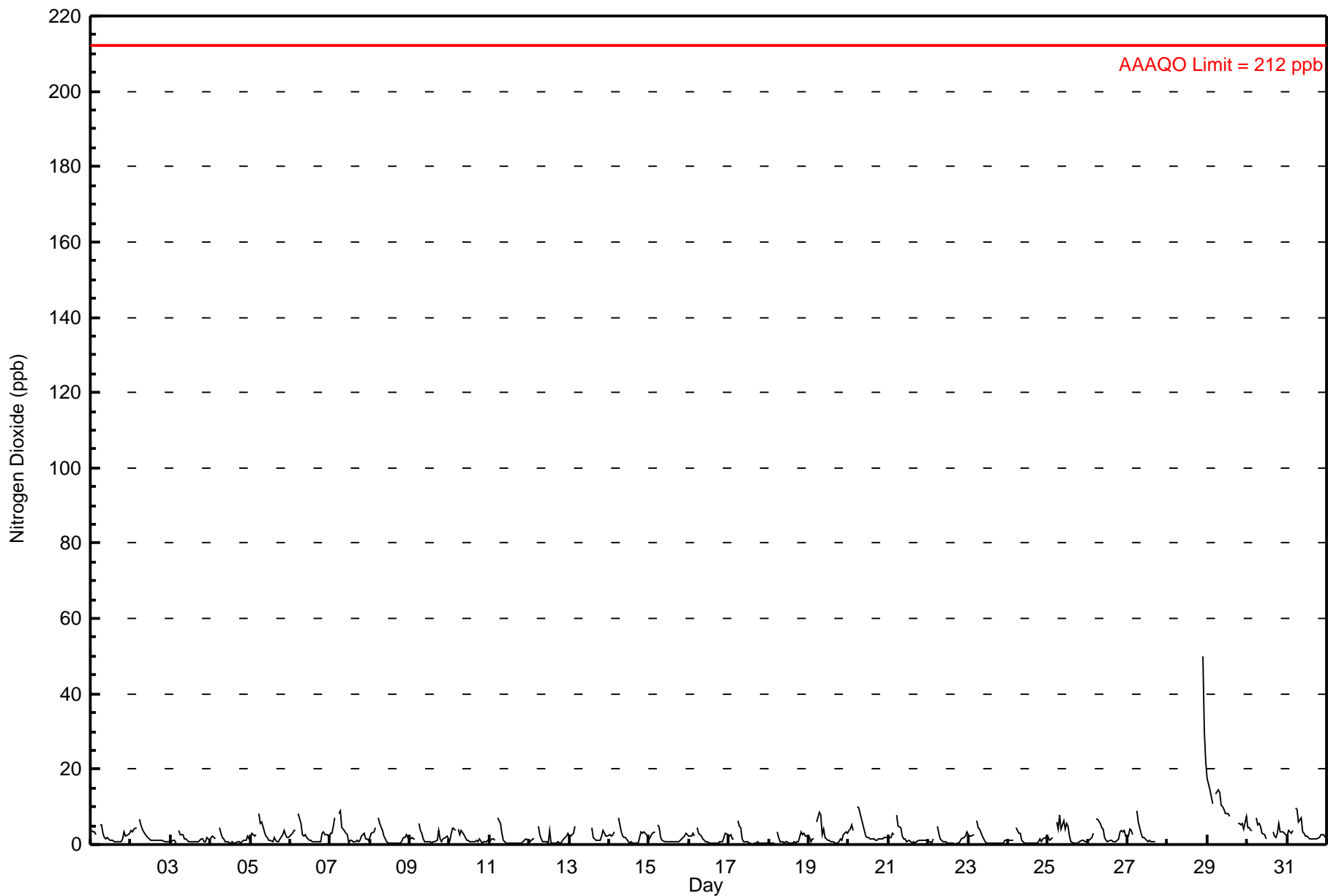
**Beaverlodge - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 49.9 ppb on Aug 28 22:00	Maximum Daily Average: 9.7 ppb on Aug 29
Minimum Value: 0 ppb on Aug 17 15:00	Hours of Data: 672
Maximum Diurnal Average: 6.6 ppb at hour 6	Hours of Missing Data: 72
Monthly Average: 2.43 ppb	Hours of Calibration: 44
Minimum Daily Average: 1.2 ppb on Aug 22	Percent Operational Time: 96.2
Minimum Diurnal Average: 0.7 ppb at hour 17	
Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.8 Median = 1.5 Q <sub>3</sub> = 3.0 P <sub>90</sub> = 5.2 P <sub>99</sub> = 13.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	4	3	3	3	A	5	5	3	2	1	2	1	1	1	1	1	1	1	1	2	3	2	2	3	2.2	5.1																							
2-Aug	4	3	4	5	A	7	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2.3	6.9																							
3-Aug	1	1	1	1	A	4	3	3	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1.3	3.8																							
4-Aug	2	2	2	1	A	5	3	2	1	1	1	1	1	1	1	0	1	1	0	1	1	1	2	1	1.3	4.6																							
5-Aug	2	3	2	3	A	8	6	6	3	2	2	1	1	1	2	1	1	1	1	3	4	3	2	2	2.6	8.2																							
6-Aug	2	3	4	4	A	8	6	3	2	2	2	1	1	1	1	1	1	1	3	3	3	3	2	2	2.5	8.2																							
7-Aug	3	3	5	7	A	8	9	4	4	3	3	0	1	1	1	1	1	1	2	3	2	1	1	1	2.9	9.0																							
8-Aug	2	3	3	5	A	7	6	4	2	1	1	1	0	0	0	0	0	0	1	1	2	2	3	1	2.0	7.1																							
9-Aug	2	2	1	2	A	5	4	3	2	1	1	1	1	1	1	1	1	4	2	1	2	2	2	1	1.7	5.4																							
10-Aug	1	3	4	4	A	4	3	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	4.4																							
11-Aug	1	1	2	1	A	7	6	3	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1.4	7.1																							
12-Aug	1	1	2	1	A	5	3	2	1	1	1	1	4	1	1	1	1	1	0	0	1	2	2	3	1.4	4.7																							
13-Aug	2	2	3	5	A	6	C	C	C	C	C	C	C	4	2	1	1	1	1	2	4	3	2	2	--	5.9																							
14-Aug	2	2	3	3	A	7	5	3	2	2	2	1	1	1	0	0	0	1	2	3	3	3	3	2	2.2	7.1																							
15-Aug	2	2	3	3	A	5	5	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2	1.8	5.4																							
16-Aug	2	2	3	2	A	5	3	2	2	1	1	1	0	0	0	0	0	0	1	1	1	2	3	3	1.6	4.7																							
17-Aug	2	2	2	1	A	6	5	5	2	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	1.4	6.2																							
18-Aug	1	0	0	0	A	3	2	1	1	1	1	1	1	1	0	1	1	1	1	3	3	3	2	2	1.2	3.5																							
19-Aug	2	1	1	2	A	6	9	8	3	4	2	1	1	1	1	0	1	1	2	1	3	3	3	3	2.4	8.6																							
20-Aug	4	4	5	4	A	10	10	8	7	4	2	2	2	1	1	1	1	1	1	2	2	2	2	2	3.4	10.0																							
21-Aug	2	2	3	3	A	8	5	4	2	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1.9	7.8																							
22-Aug	1	1	0	2	A	5	3	1	1	1	1	0	0	0	0	0	0	0	0	1	1	2	2	3	1.2	4.9																							
23-Aug	3	2	2	3	A	7	5	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1.6	6.5																							
24-Aug	1	1	1	1	A	4	3	3	1	1	0	0	0	0	0	0	0	0	1	2	1	1	2	1	1.2	4.4																							
25-Aug	2	1	2	2	A	6	4	8	4	6	4	5	5	2	1	1	1	0	1	1	1	1	1	1	2.6	7.7																							
26-Aug	1	1	2	3	A	7	7	6	4	4	2	1	1	1	1	1	1	1	3	4	3	4	2	2	2.6	6.8																							
27-Aug	2	4	4	3	A	9	6	4	3	2	2	1	1	1	1	1	1	N	N	N	N	N	N	N	--	8.8																							
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	50	30	22	--	49.9																							
29-Aug	18	15	13	11	A	13	14	14	11	10	9	8	8	8	A	A	M	A	5	6	5	6	4	7	9.7	17.5																							
30-Aug	4	5	4	4	A	7	5	6	5	3	3	1	C	C	C	3	2	2	3	6	3	3	3	3	3.7	7.1																							
31-Aug	2	4	3	4	A	10	9	6	7	4	3	2	2	2	2	1	1	1	2	2	2	3	3	2	3.3	9.6																							
																								2.6	2.7	2.9	3.0	--	6.6	5.4	4.3	2.9	2.3	1.8	1.3	1.4	1.1	0.8	0.8	0.7	0.9	1.2	1.7	2.0	3.6	3.0	2.7	Diurnal Average	
																								17.5	14.6	12.6	10.9	--	13.5	14.4	13.7	10.5	9.9	9.4	8.1	8.1	7.6	2.0	3.3	2.3	3.8	5.5	5.8	5.3	49.9	30.3	22.0	Diurnal Maximum	

C - Calibration                      M - Maintenance                      N - Not Valid                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb      24-hr 106 ppb

# Hourly Averages for NO<sub>2</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

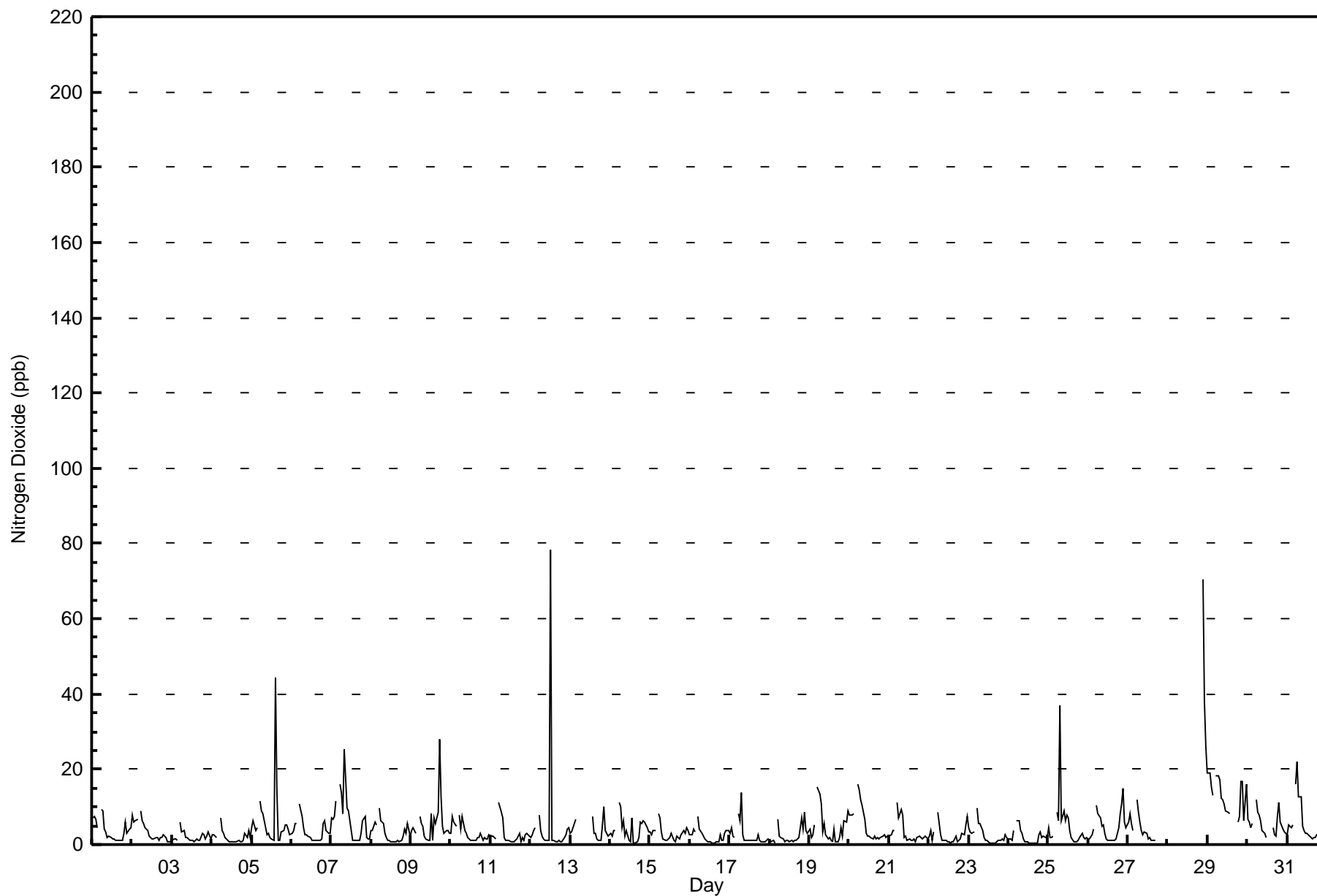
Maximum Value: 78.2 ppb on Aug 12 13:00	Maximum Daily Average: 13.2 ppb on Aug 29	Hours in Service: 744
Minimum Value: 0 ppb on Aug 18 04:00	Minimum Daily Average: 1.9 ppb on Aug 4	Hours of Data: 672
Maximum Diurnal Average: 10.3 ppb at hour 6	Minimum Diurnal Average: 1.5 ppb at hour 17	Hours of Missing Data: 72
Monthly Average: 4.24 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.3 Median = 2.5 Q <sub>3</sub> = 5.4 P <sub>90</sub> = 8.5 P <sub>99</sub> = 25.7	Hours of Calibration: 44
		Percent Operational Time: 96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	7	8	7	4	A	9	9	4	3	2	2	2	1	1	1	1	1	1	1	3	6	3	4	4	3.8	9.5
2-Aug	8	6	6	7	A	9	6	5	4	4	2	2	1	1	2	2	1	2	2	2	2	1	1	1	3.4	8.9
3-Aug	1	1	1	1	A	6	3	4	2	2	1	1	1	1	1	1	1	1	3	3	1	2	3	1	1.9	6.0
4-Aug	2	3	2	2	A	7	4	3	2	1	1	1	1	1	1	1	1	1	1	1	3	2	4	2	1.9	7.0
5-Aug	4	6	4	5	A	11	9	8	5	3	3	2	2	1	44	15	1	1	3	4	5	5	4	3	6.4	44.2
6-Aug	3	4	6	5	A	11	7	5	3	3	2	2	1	1	1	1	1	1	6	6	4	3	3	3	3.4	10.9
7-Aug	7	7	7	12	A	16	14	8	25	10	9	6	4	1	1	1	1	3	6	7	2	2	1	6.6	25.4	
8-Aug	4	4	6	5	A	10	7	5	3	2	1	1	1	1	1	1	1	1	2	4	3	5	2	3.0	9.6	
9-Aug	4	5	4	3	A	8	6	5	2	2	1	1	8	1	7	6	9	28	13	5	3	4	4	3	5.6	28.0
10-Aug	3	8	6	5	A	8	4	8	4	3	2	2	1	1	1	1	2	2	3	1	2	1	2	2	3.1	7.7
11-Aug	2	2	2	1	A	11	9	7	2	1	1	1	1	1	1	1	2	3	1	2	1	3	3	2	2.6	11.2
12-Aug	2	3	4	4	A	8	4	2	1	1	1	1	78	1	1	1	1	1	1	1	2	3	4	5	5.6	78.2
13-Aug	3	3	5	7	A	9	C	C	C	C	C	C	C	7	3	3	2	1	1	5	10	4	3	2	--	10.0
14-Aug	3	2	4	4	A	11	10	5	6	2	4	1	1	7	1	1	1	2	6	6	6	6	5	3	4.1	11.2
15-Aug	3	3	4	4	A	8	7	3	2	1	1	1	2	3	1	1	2	2	1	2	4	3	4	4	2.9	8.2
16-Aug	3	3	4	3	A	8	4	3	2	2	1	1	1	0	0	0	1	1	3	1	1	3	4	4	2.2	7.6
17-Aug	3	4	2	2	A	8	7	14	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	2.6	14.0
18-Aug	1	1	1	0	A	7	2	2	1	1	1	1	1	1	1	1	2	2	7	4	9	4	3	2.3	8.6	
19-Aug	4	2	3	5	A	15	13	11	3	6	3	1	2	1	1	4	1	1	2	5	2	6	6	9	4.6	15.3
20-Aug	8	8	8	8	A	16	15	12	10	7	3	2	2	2	2	2	2	2	2	2	2	3	2	2	5.2	16.1
21-Aug	2	3	4	4	A	11	7	9	8	2	2	1	2	1	1	2	1	2	2	2	2	2	2	2	3.1	11.2
22-Aug	2	4	1	3	A	9	6	3	1	1	1	1	0	1	1	2	1	1	1	1	3	2	5	7	2.5	8.5
23-Aug	4	3	3	3	A	10	6	6	4	2	1	1	1	0	0	0	0	1	1	1	2	1	3	2	2.4	9.6
24-Aug	1	1	1	4	A	7	6	4	3	1	1	1	0	0	0	0	0	0	3	4	2	2	2	2	2.1	6.5
25-Aug	4	2	2	2	A	9	6	37	6	9	6	8	7	4	2	1	1	1	1	2	3	2	1	2	5.1	37.1
26-Aug	1	1	3	4	A	10	8	7	5	5	3	2	1	1	1	1	1	2	4	8	11	15	6	5	4.6	14.8
27-Aug	6	8	6	4	A	12	8	6	4	2	3	3	1	2	1	1	1	N	N	N	N	N	N	N	--	12.0
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	70	38	26	--	70.5
29-Aug	19	19	15	13	A	18	18	17	12	12	11	9	9	8	A	A	M	A	6	7	17	17	6	16	13.2	19.1
30-Aug	7	6	5	6	A	12	8	8	6	4	3	2	C	C	C	5	3	2	7	11	6	4	3	3	5.6	11.9
31-Aug	3	5	4	5	A	16	22	13	13	5	4	3	3	2	2	2	2	2	3	3	4	3	4	4	5.4	21.9

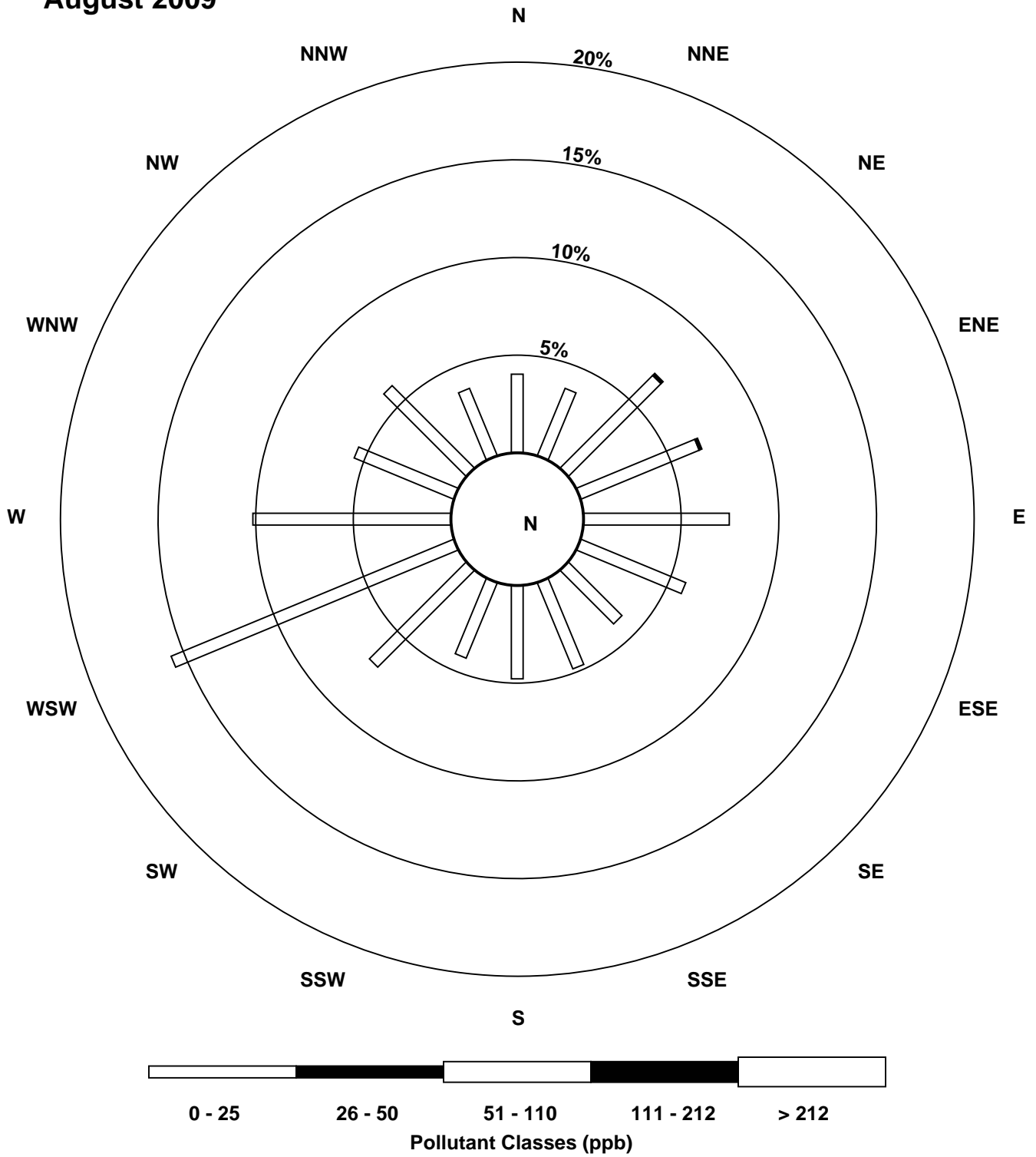
4.2	4.5	4.3	4.5	--	10.3	8.1	7.7	5.1	3.3	2.6	2.1	4.8	1.9	2.8	2.0	1.5	2.3	2.7	3.6	4.2	6.2	4.5	4.2	Diurnal Average	
19.1	18.9	15.4	13.0	--	18.2	21.9	37.1	25.4	11.8	10.8	9.1	78.2	8.0	44.2	14.5	8.7	28.0	12.8	11.3	16.8	70.5	38.1	26.1	Diurnal Maximum	

C - Calibration                      M - Maintenance                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Maximums for NO<sub>2</sub> at Beaverlodge August 2009

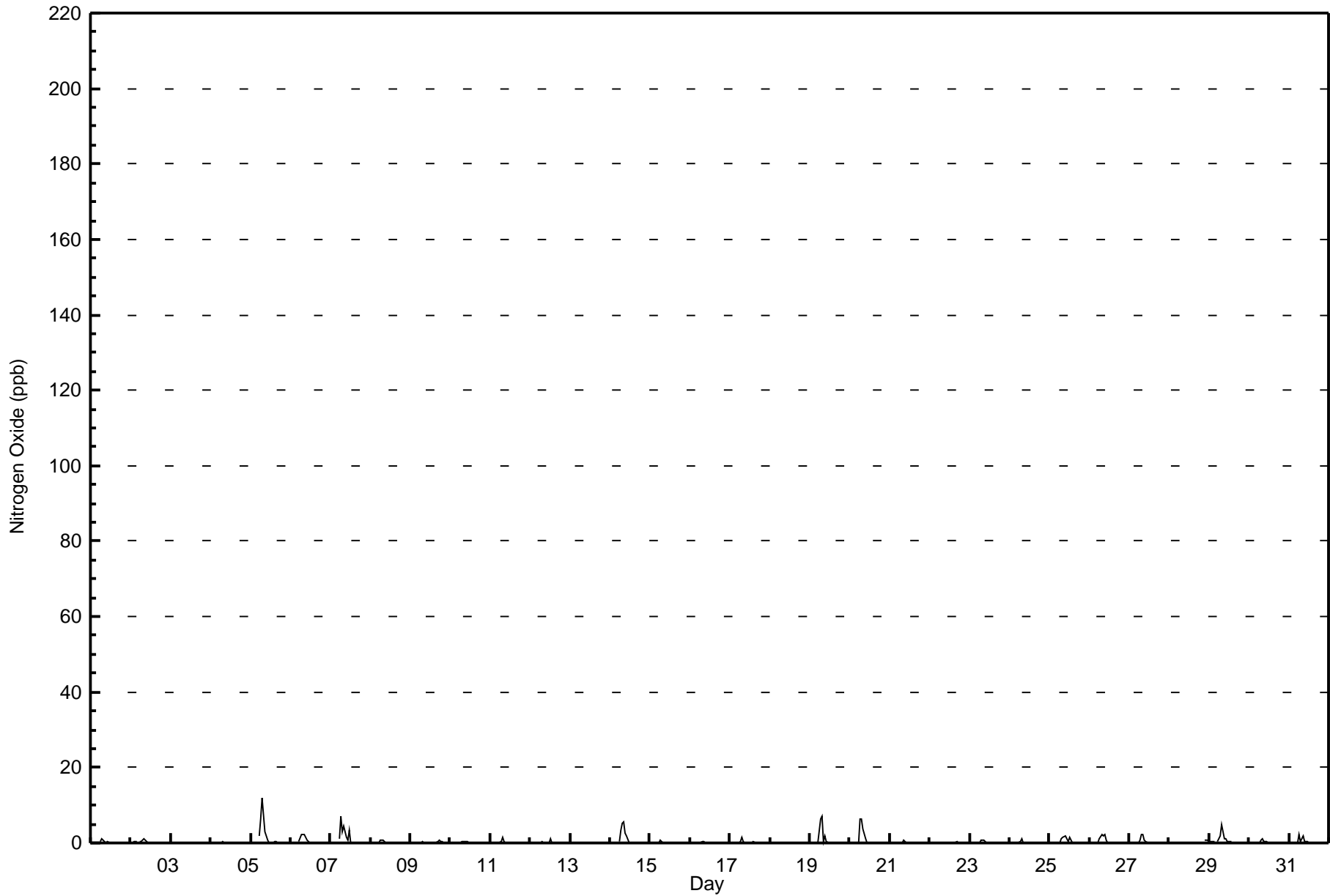


# Pollutant Rose for NO<sub>2</sub> at Beaverlodge August 2009





# Hourly Averages for NO at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Nitrogen Oxide (NO) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 120.7 ppb on Aug 7 12:00	Maximum Daily Average: 9.1 ppb on Aug 7	Hours in Service: 744
Minimum Value: 0 ppb on Aug 4 21:00	Minimum Daily Average: 0.1 ppb on Aug 18	Hours of Data: 672
Maximum Diurnal Average: 6.3 ppb at hour 7	Minimum Diurnal Average: 0.0 ppb at hour 24	Hours of Missing Data: 72
Monthly Average: 1.44 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 2.5 P <sub>99</sub> = 26.1	Hours of Calibration: 44
		Percent Operational Time: 96.2

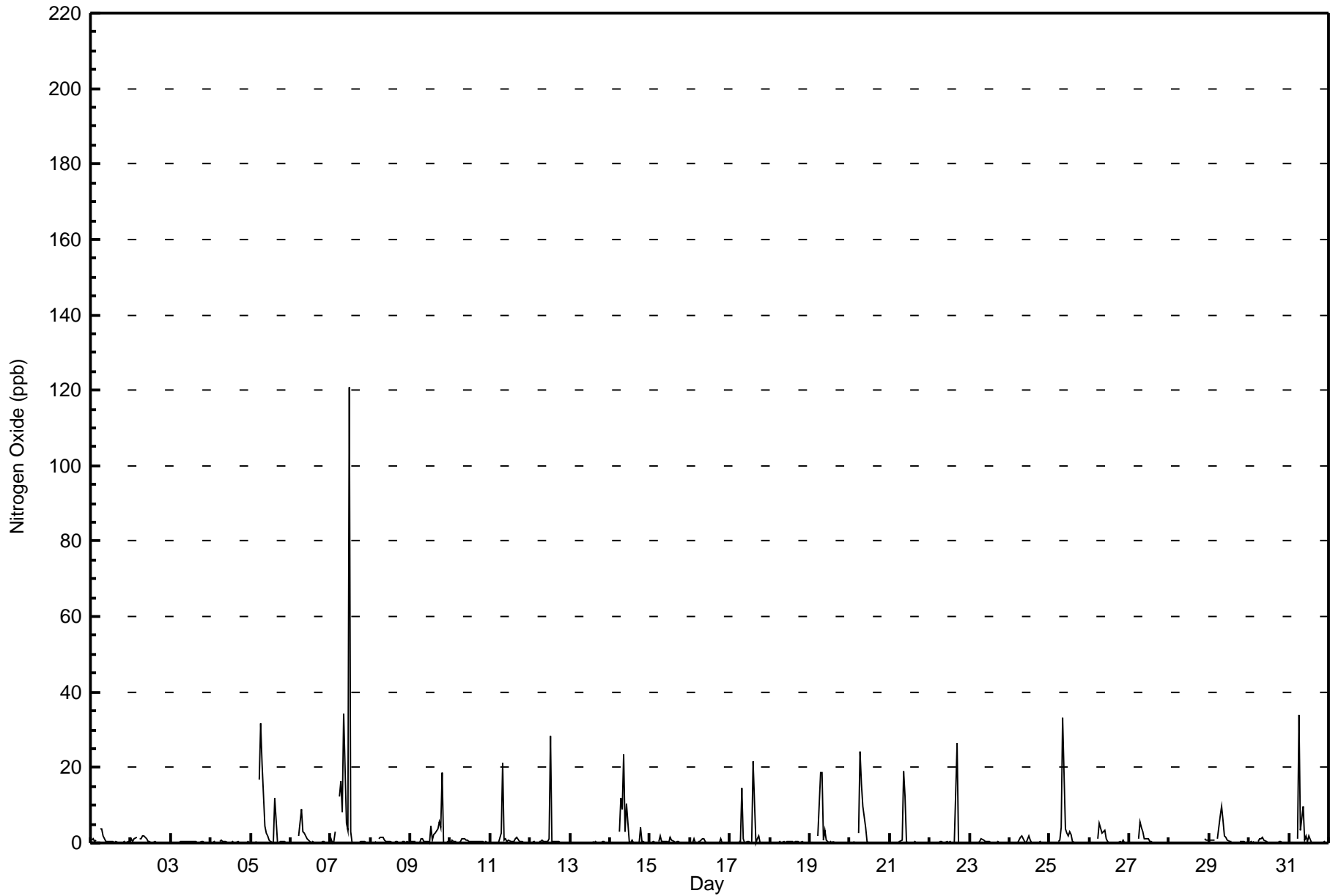
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	A	4	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.9
2-Aug	1	0	1	1	A	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.7
3-Aug	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
4-Aug	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
5-Aug	0	0	0	0	A	17	32	21	4	2	2	1	0	0	12	6	0	0	0	0	0	0	0	0	4.3	31.9
6-Aug	0	0	0	0	A	2	9	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	9.1
7-Aug	1	0	0	3	A	12	17	8	34	5	3	121	3	0	0	0	0	0	0	0	0	0	0	0	9.1	120.7
8-Aug	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
9-Aug	0	0	0	0	A	0	1	1	0	0	0	0	4	1	2	3	4	5	4	19	0	0	0	0	2.0	18.5
10-Aug	0	1	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
11-Aug	0	0	0	0	A	0	2	21	1	1	0	1	0	0	1	2	0	0	0	0	0	0	0	0	1.3	21.1
12-Aug	0	0	0	0	A	0	0	1	0	0	0	1	28	0	0	0	0	0	0	0	0	0	0	0	1.5	28.4
13-Aug	0	0	0	0	A	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	0.2
14-Aug	0	0	0	0	A	3	12	9	23	3	10	0	0	1	0	0	0	0	4	0	0	0	0	0	2.9	23.4
15-Aug	0	0	0	0	A	1	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.8
16-Aug	0	0	1	0	A	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	1.2
17-Aug	0	0	0	0	A	1	0	14	1	0	0	0	0	0	21	0	1	2	0	0	0	0	0	0	1.8	21.5
18-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
19-Aug	0	0	0	0	A	2	19	19	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.9	18.7
20-Aug	0	0	0	0	A	3	24	16	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	24.1
21-Aug	0	0	0	0	A	0	0	1	19	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	19.0
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	1.2	26.5
23-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
24-Aug	0	0	0	0	A	0	1	2	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
25-Aug	0	0	0	0	A	0	1	4	33	4	3	2	3	2	0	0	0	0	0	0	0	0	0	0	2.3	33.3
26-Aug	0	0	0	0	A	1	5	3	3	3	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.8	5.1
27-Aug	0	0	0	0	A	1	6	4	3	1	1	1	1	0	0	0	0	0	N	N	N	N	N	N	--	5.6
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	1	1	1	--	1.0
29-Aug	1	1	1	1	A	1	7	10	6	2	1	1	0	0	A	A	M	A	0	0	0	0	0	0	1.8	9.5
30-Aug	0	0	0	0	A	0	1	1	2	1	1	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	1.5
31-Aug	0	0	0	0	A	1	34	3	10	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2.3	33.9

0.1	0.1	0.2	0.2	--	1.7	6.3	5.2	5.6	1.8	1.1	4.6	1.6	0.3	1.3	0.4	1.2	0.3	0.4	0.8	0.1	0.1	0.1	0.0	Diurnal Average	
1.2	1.0	1.2	2.8	--	16.8	33.9	21.1	34.2	12.2	10.4	120.7	28.4	2.3	21.5	6.0	26.5	5.5	4.2	18.5	0.7	1.0	0.8	0.7	Diurnal Maximum	

C - Calibration                      M - Maintenance                      N - Not Valid                      A - Automated Daily Zero Span



# Hourly Maximums for NO at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
August 1, 2009 to September 1, 2009**

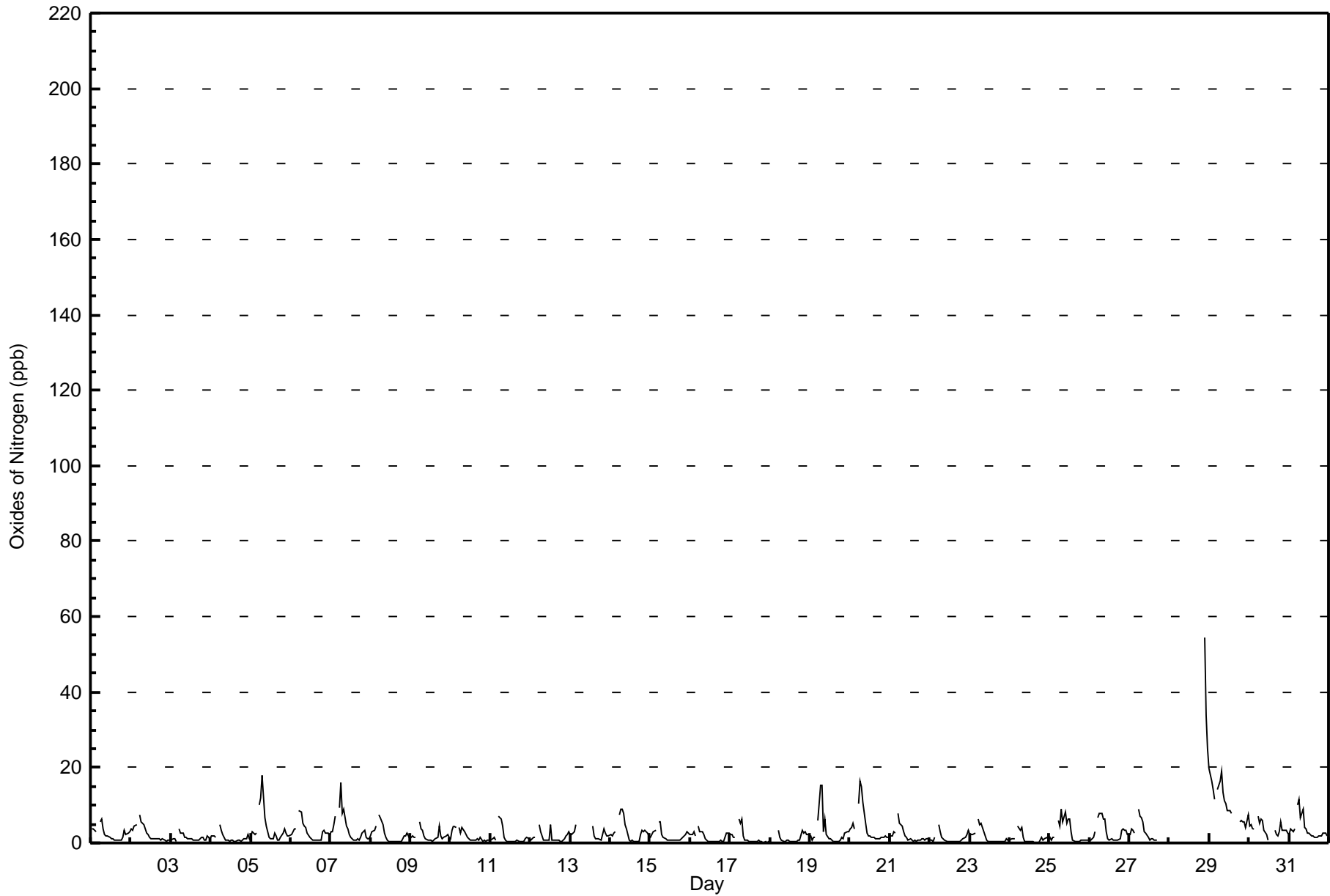
Maximum Value: 54.3 ppb on Aug 28 22:00	Maximum Daily Average: 10.8 ppb on Aug 29	Hours in Service: 744
Minimum Value: 0 ppb on Aug 18 04:00	Minimum Daily Average: 1.1 ppb on Aug 18	Hours of Data: 672
Maximum Diurnal Average: 7.0 ppb at hour 7	Minimum Diurnal Average: 0.7 ppb at hour 17	Hours of Missing Data: 72
Monthly Average: 2.72 ppb	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.8 Median = 1.5 Q <sub>3</sub> = 3.2 P <sub>90</sub> = 6.1 P <sub>99</sub> = 16.2	Hours of Calibration: 44
		Percent Operational Time: 96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	4	4	3	3	A	5	6	4	2	2	2	1	1	1	1	1	1	1	1	2	3	2	2	3	2.4	6.2
2-Aug	4	3	4	5	A	7	6	5	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2.5	7.3
3-Aug	1	1	1	1	A	4	3	3	2	2	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1.3	3.8
4-Aug	2	2	2	1	A	5	3	2	2	1	1	1	1	1	1	0	1	1	0	1	1	1	2	1	1.3	4.7
5-Aug	2	3	2	3	A	10	12	18	7	4	3	1	1	1	2	2	1	1	1	3	4	3	2	2	3.8	17.9
6-Aug	2	3	4	4	A	9	8	5	5	4	3	1	1	1	1	1	1	1	3	3	3	3	2	2	2.9	8.6
7-Aug	3	3	5	7	A	9	16	8	9	5	4	2	1	1	1	1	1	1	2	3	1	1	1	1	3.8	16.1
8-Aug	2	3	3	5	A	7	7	5	3	2	1	1	0	0	0	0	0	0	1	1	2	2	2	1	2.1	7.3
9-Aug	2	2	1	2	A	5	4	3	2	1	1	1	1	1	1	1	1	4	2	1	2	2	2	1	1.9	5.5
10-Aug	1	3	5	4	A	4	3	4	3	2	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1.8	4.6
11-Aug	1	1	1	1	A	7	6	5	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1.5	7.1
12-Aug	1	1	2	1	A	5	3	2	1	1	1	1	5	1	1	1	1	1	0	0	1	2	2	3	1.5	5.0
13-Aug	2	2	3	5	A	6	C	C	C	C	C	C	C	4	2	1	1	1	1	2	4	3	2	2	--	6.0
14-Aug	2	2	3	3	A	7	9	9	8	5	4	1	1	1	0	0	0	0	2	3	3	3	3	2	3.1	8.9
15-Aug	2	2	3	3	A	6	6	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2	1.9	5.6
16-Aug	2	2	3	2	A	5	3	3	2	1	1	1	0	0	0	0	0	0	1	0	1	2	3	3	1.5	4.6
17-Aug	2	2	1	1	A	6	5	6	2	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1.4	6.3
18-Aug	0	0	0	0	A	3	2	1	1	0	1	1	0	0	0	1	0	1	1	3	2	3	2	2	1.1	3.4
19-Aug	2	1	1	1	A	6	15	15	3	6	2	1	1	1	0	0	0	0	1	1	1	3	3	3	3.0	15.4
20-Aug	4	4	5	4	A	10	16	15	11	5	3	2	2	1	1	1	1	1	1	1	1	2	2	2	4.2	16.3
21-Aug	2	2	3	3	A	8	5	5	3	2	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1.9	7.9
22-Aug	1	1	0	1	A	5	3	1	1	1	1	0	0	0	0	0	0	0	0	1	1	2	2	3	1.1	4.9
23-Aug	2	2	2	3	A	7	5	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1.6	6.5
24-Aug	1	1	1	1	A	4	4	4	1	0	0	0	0	0	0	0	0	0	1	2	1	1	2	1	1.1	4.4
25-Aug	2	1	1	2	A	6	4	9	6	8	5	6	6	3	1	0	0	0	0	1	1	1	1	1	2.8	9.1
26-Aug	1	1	2	3	A	7	8	8	6	6	3	1	1	1	1	1	1	1	3	4	3	4	2	2	3.0	8.0
27-Aug	2	4	4	3	A	9	7	7	5	3	3	1	1	1	1	1	1	N	N	N	N	N	N	N	--	9.1
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	54	34	25	--	54.3
29-Aug	20	16	14	12	A	14	16	19	14	11	10	9	8	8	A	A	M	A	6	6	5	6	4	8	10.8	19.8
30-Aug	5	5	4	4	A	7	5	6	6	3	2	1	C	C	C	3	2	2	3	6	3	3	3	3	3.8	7.1
31-Aug	2	4	3	4	A	10	12	7	9	4	4	3	3	2	2	2	1	1	2	2	3	3	3	2	3.7	11.7

2.6	2.7	2.9	3.0	--	6.8	7.0	6.4	4.2	3.0	2.1	1.4	1.5	1.2	0.8	0.8	0.7	0.9	1.2	1.8	1.9	3.7	3.1	2.7	Diurnal Average	
19.8	16.4	14.0	11.7	--	14.2	16.5	18.9	13.6	11.3	10.4	8.5	8.4	7.8	2.4	3.4	2.4	4.5	5.7	6.0	5.4	54.3	33.9	24.9	Diurnal Maximum	

C - Calibration                      M - Maintenance                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Averages for NO<sub>x</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

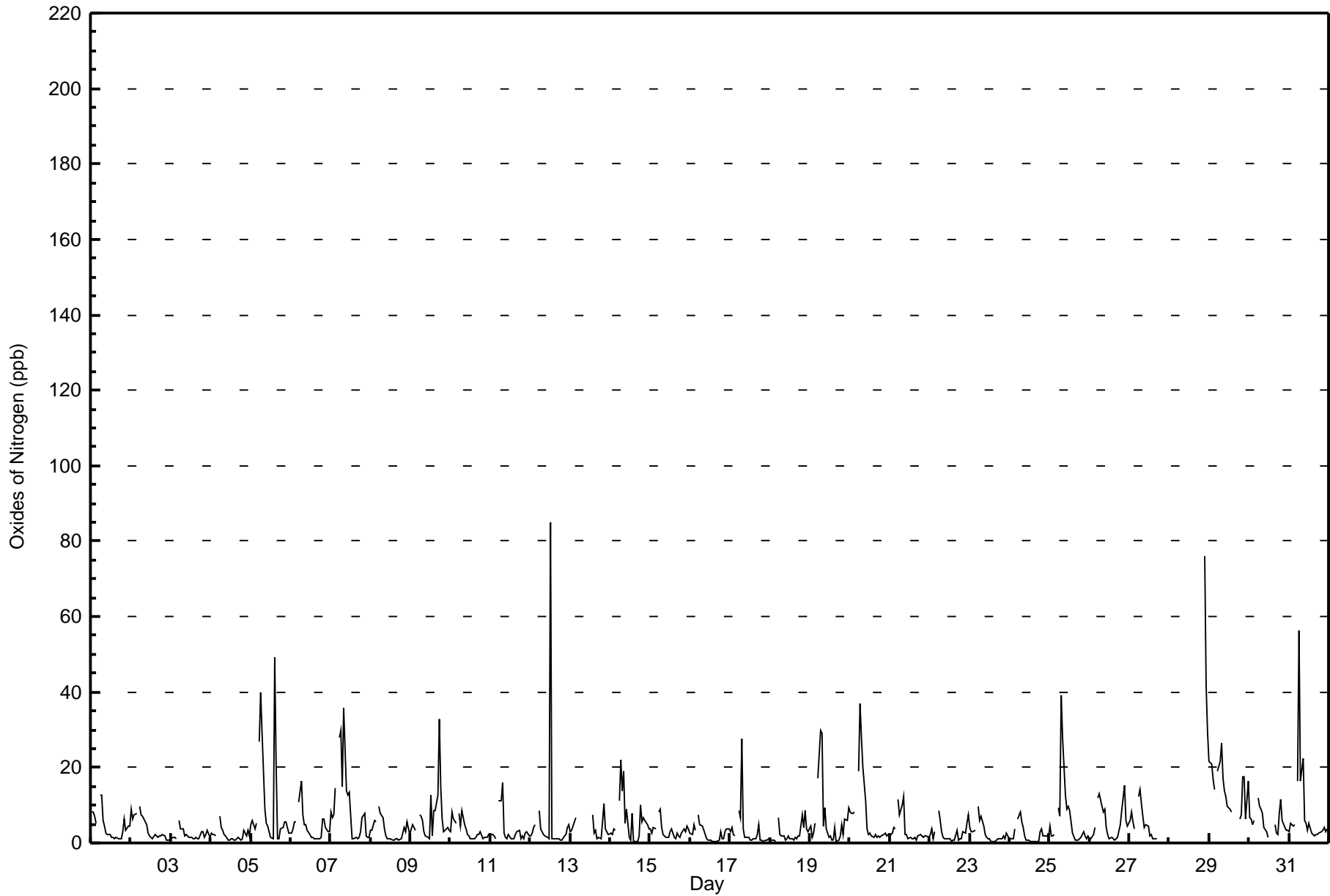
**Beaverlodge - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 84.9 ppb on Aug 12 13:00	Maximum Daily Average: 14.9 ppb on Aug 29	Hours in Service: 744
Minimum Value: 0 ppb on Aug 24 16:00	Minimum Daily Average: 2.0 ppb on Aug 4	Hours of Data: 672
Maximum Diurnal Average: 14.1 ppb at hour 7	Minimum Diurnal Average: 1.8 ppb at hour 17	Hours of Missing Data: 72
Monthly Average: 5.23 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.5 Median = 2.8 Q <sub>3</sub> = 6.0 P <sub>90</sub> = 11.0 P <sub>99</sub> = 39.2	Hours of Calibration: 44
		Percent Operational Time: 96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	8	8	7	5	A	13	13	6	4	2	2	2	2	2	1	2	1	1	1	3	6	3	4	4	4.4	12.8
2-Aug	9	7	8	8	A	10	7	7	6	5	3	2	2	1	2	2	1	2	2	2	2	1	1	1	3.9	9.7
3-Aug	1	2	1	1	A	6	4	4	2	2	2	1	2	1	1	1	1	3	3	2	2	3	2	2.1	6.0	
4-Aug	3	2	2	2	A	7	4	3	2	2	1	1	1	1	1	1	2	1	1	1	3	2	3	2	2.0	6.9
5-Aug	5	6	4	5	A	27	40	29	9	5	4	3	2	1	49	21	1	1	4	4	6	5	4	3	10.3	49.1
6-Aug	3	4	6	6	A	11	16	7	5	5	3	2	2	1	1	1	1	2	6	6	4	3	3	4.3	16.4	
7-Aug	8	7	7	15	A	28	30	15	36	14	13	13	7	1	1	1	1	3	7	8	2	2	2	9.6	35.7	
8-Aug	3	3	6	5	A	10	8	7	4	2	1	1	1	1	1	1	1	1	3	4	3	6	2	3.3	9.8	
9-Aug	4	5	4	3	A	8	7	6	3	2	1	1	13	2	9	9	13	33	15	6	3	4	4	3	6.8	33.0
10-Aug	3	8	6	5	A	8	4	9	5	4	2	2	1	1	1	1	2	2	3	1	2	2	2	2	3.4	8.6
11-Aug	2	2	2	1	A	11	11	16	3	1	1	2	1	1	1	2	3	3	1	2	1	3	3	2	3.4	16.1
12-Aug	2	3	4	5	A	9	4	3	2	2	2	1	85	1	1	1	1	1	1	1	2	2	4	5	6.1	84.9
13-Aug	3	3	5	7	A	9	C	C	C	C	C	C	C	8	3	3	1	1	1	5	10	4	3	2	--	10.3
14-Aug	3	2	4	3	A	11	22	14	19	5	9	2	1	8	1	1	0	2	10	6	7	6	5	4	6.2	21.9
15-Aug	4	3	4	4	A	8	9	4	2	2	2	2	3	4	2	1	3	2	2	3	4	3	4	4	3.3	8.9
16-Aug	3	2	5	3	A	7	5	4	3	2	1	1	1	0	0	0	0	1	3	1	1	3	4	4	2.4	7.4
17-Aug	3	4	2	2	A	9	7	28	4	1	1	1	1	1	1	1	2	5	1	1	0	1	1	1	3.5	27.8
18-Aug	1	1	1	0	A	7	2	2	2	1	1	2	1	1	1	2	1	2	2	7	4	9	4	3	2.4	8.7
19-Aug	4	2	2	5	A	17	30	29	4	9	4	2	2	1	1	4	0	1	2	5	2	6	6	9	6.4	29.8
20-Aug	8	8	8	8	A	19	37	28	20	11	4	2	3	2	2	2	2	2	1	2	2	3	2	2	7.7	37.0
21-Aug	2	2	4	4	A	11	8	10	12	2	2	1	2	1	1	2	1	2	2	2	1	2	2	1	3.4	12.2
22-Aug	2	4	1	3	A	9	6	3	2	1	1	1	1	0	1	1	3	1	1	1	3	3	5	7	2.7	8.5
23-Aug	4	3	3	3	A	10	6	7	4	2	2	1	1	0	0	0	1	1	1	1	2	1	3	2	2.6	9.7
24-Aug	1	1	1	4	A	6	8	6	4	2	1	1	0	0	0	0	0	0	3	4	2	2	2	2	2.2	8.1
25-Aug	4	2	2	2	A	9	7	39	27	13	9	10	9	6	3	1	1	1	1	2	3	2	1	2	6.7	39.3
26-Aug	1	1	2	4	A	12	13	10	8	9	4	2	1	1	1	1	1	5	8	12	15	6	5	5.4	15.3	
27-Aug	6	8	6	4	A	12	14	10	7	4	5	4	2	2	1	1	1	N	N	N	N	N	N	N	--	14.2
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	76	42	29	--	75.9
29-Aug	22	21	17	14	A	19	22	26	17	14	12	10	9	8	A	A	M	A	6	7	18	17	6	17	14.9	26.5
30-Aug	7	6	5	6	A	12	10	9	8	4	3	2	C	C	C	5	3	2	8	12	6	4	3	3	5.8	12.0
31-Aug	3	5	4	5	A	16	56	16	22	6	5	3	5	2	2	2	2	2	3	3	3	4	3	4	7.8	56.3
	4.4	4.5	4.4	4.8	--	11.7	14.1	12.3	8.5	4.6	3.5	2.7	5.6	2.1	3.2	2.4	1.8	2.7	3.0	3.8	4.3	6.4	4.7	4.4	Diurnal Average	
	21.7	21.0	16.9	14.6	--	28.0	56.3	39.3	35.7	13.8	12.5	13.3	84.9	8.3	49.1	20.6	12.7	33.0	14.9	11.7	17.6	75.9	41.9	29.3	Diurnal Maximum	

C - Calibration                      M - Maintenance                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Maximums for NO<sub>x</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

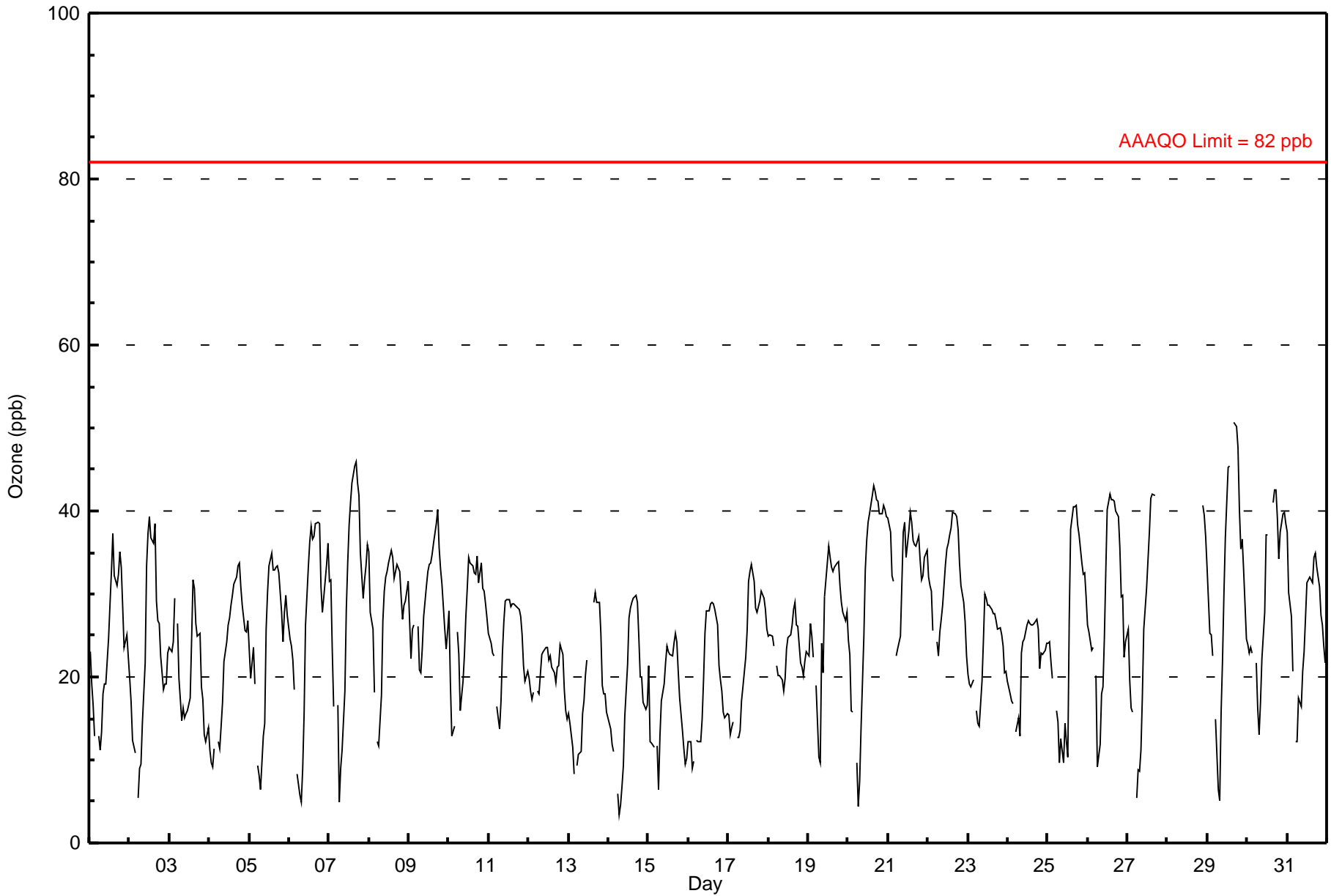
**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 50.8 ppb on Aug 29 17:00	Maximum Daily Average: 34.0 ppb on Aug 21
Minimum Value: 3 ppb on Aug 14 07:00	Hours of Data: 679
Maximum Diurnal Average: 33.8 ppb at hour 17	Hours of Missing Data: 65
Monthly Average: 25.19 ppb	Hours of Calibration: 38
Minimum Daily Average: 17.1 ppb on Aug 15	Percent Operational Time: 96.4
Minimum Diurnal Average: 12.7 ppb at hour 7	
Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 12.3 Q <sub>1</sub> = 18.4 Median = 25.3 Q <sub>3</sub> = 32.0 P <sub>90</sub> = 37.5 P <sub>99</sub> = 45.3	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	23	19	17	13	A	13	11	13	18	19	19	25	29	33	37	32	31	32	35	33	28	24	25	22	24.0	37.3																							
2-Aug	20	17	12	11	A	5	9	9	14	22	33	37	39	37	36	38	29	27	26	23	19	19	19	23	22.8	39.4																							
3-Aug	24	23	24	29	A	26	20	15	16	15	16	17	24	32	31	26	25	25	19	17	13	12	14	20.9	31.6																								
4-Aug	11	10	9	11	A	12	11	14	17	22	24	26	27	29	30	31	32	33	34	31	29	26	25	27	22.7	33.7																							
5-Aug	23	20	24	19	A	9	8	6	13	14	26	30	33	35	33	33	33	33	33	28	24	28	30	27	24.5	35.0																							
6-Aug	25	24	22	18	A	8	6	5	9	16	26	33	36	38	37	37	38	39	38	31	28	30	34	36	26.7	38.7																							
7-Aug	32	32	23	16	A	17	5	9	11	18	28	34	38	41	43	45	46	43	42	35	30	32	33	36	30.0	45.9																							
8-Aug	35	28	26	18	A	12	12	18	27	30	32	33	34	35	34	32	33	33	33	30	27	29	29	31	28.3	35.3																							
9-Aug	27	22	26	26	A	26	21	21	23	27	31	33	34	34	35	36	38	40	36	33	31	26	23	25	29.3	40.1																							
10-Aug	28	19	13	14	A	25	23	16	19	23	27	31	34	34	33	33	32	35	31	34	31	30	29	27	27.0	34.6																							
11-Aug	25	24	23	23	A	16	14	17	23	27	29	29	29	29	29	29	29	28	28	27	25	21	20	21	24.5	29.4																							
12-Aug	20	18	17	18	A	18	18	20	23	23	24	24	22	23	21	21	19	21	21	24	23	18	16	15	20.3	23.8																							
13-Aug	16	14	11	8	A	9	11	11	16	17	20	22	C	C	C	29	30	29	29	25	19	18	18	16	18.5	30.1																							
14-Aug	14	14	12	11	A	6	3	5	7	9	15	22	27	28	29	30	30	29	25	20	20	17	16	17	17.6	29.8																							
15-Aug	21	12	12	12	A	12	6	13	17	19	22	24	23	23	23	24	25	24	21	17	13	11	10	10	17.1	25.2																							
16-Aug	12	12	9	10	A	12	12	12	15	20	25	28	28	29	29	29	28	26	21	20	18	16	15	16	19.2	29.0																							
17-Aug	15	13	14	15	A	13	13	14	17	19	22	26	32	33	34	31	28	28	28	29	30	29	28	26	23.3	33.6																							
18-Aug	25	25	25	24	A	21	20	20	20	18	20	23	25	25	26	28	29	26	26	22	21	20	22	23	23.2	28.9																							
19-Aug	22	26	25	22	A	19	10	10	24	20	30	34	36	34	33	33	33	34	34	31	29	28	27	28	27.1	35.8																							
20-Aug	24	23	16	16	A	10	4	7	14	25	33	37	39	40	42	43	42	41	41	40	40	41	40	39	30.3	43.0																							
21-Aug	39	37	32	32	A	23	23	25	31	38	39	34	38	40	39	36	36	36	37	34	32	32	34	35	34.0	39.8																							
22-Aug	32	31	30	26	A	24	22	25	27	29	34	35	36	37	38	40	40	39	38	34	31	29	27	23	31.6	39.8																							
23-Aug	20	19	19	20	A	16	14	14	20	24	30	29	29	29	28	28	28	27	26	26	25	24	21	21	23.3	30.0																							
24-Aug	20	18	17	17	A	13	15	13	23	24	25	26	27	27	26	26	26	27	26	21	23	23	23	24	22.2	26.9																							
25-Aug	24	24	22	20	A	16	15	10	13	10	14	12	10	27	38	41	41	41	38	37	34	32	32	30	25.2	40.7																							
26-Aug	26	25	23	24	A	20	9	12	18	19	25	33	40	42	41	41	41	40	39	36	30	30	22	24	28.7	42.1																							
27-Aug	26	20	16	16	A	5	9	9	11	18	26	31	34	37	42	42	42	N	N	N	N	N	N	N	--	42.0																							
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	41	39	37	--	40.7																							
29-Aug	33	25	25	23	A	15	6	5	16	22	30	37	45	45	A	A	51	50	48	40	35	37	33	25	30.8	50.8																							
30-Aug	24	23	24	23	A	22	16	13	17	22	28	37	37	C	C	41	42	43	39	34	38	40	40	38	30.5	42.6																							
31-Aug	37	30	27	21	A	12	12	17	16	21	23	27	31	32	32	31	34	35	33	31	28	26	24	22	26.3	37.4																							
																								24.1	21.6	19.9	18.5	--	15.3	12.7	13.3	17.8	21.0	25.8	28.9	31.4	32.8	33.3	33.5	33.8	33.3	32.1	29.1	26.8	26.3	25.6	25.2	Diurnal Average	
																								39.1	37.5	32.2	31.6	--	26.5	23.4	25.4	31.1	37.5	38.6	37.2	45.3	45.3	43.4	45.5	50.8	50.1	47.7	40.1	39.6	40.7	40.1	39.4	Diurnal Maximum	

C - Calibration      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na

# Hourly Averages for O<sub>3</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

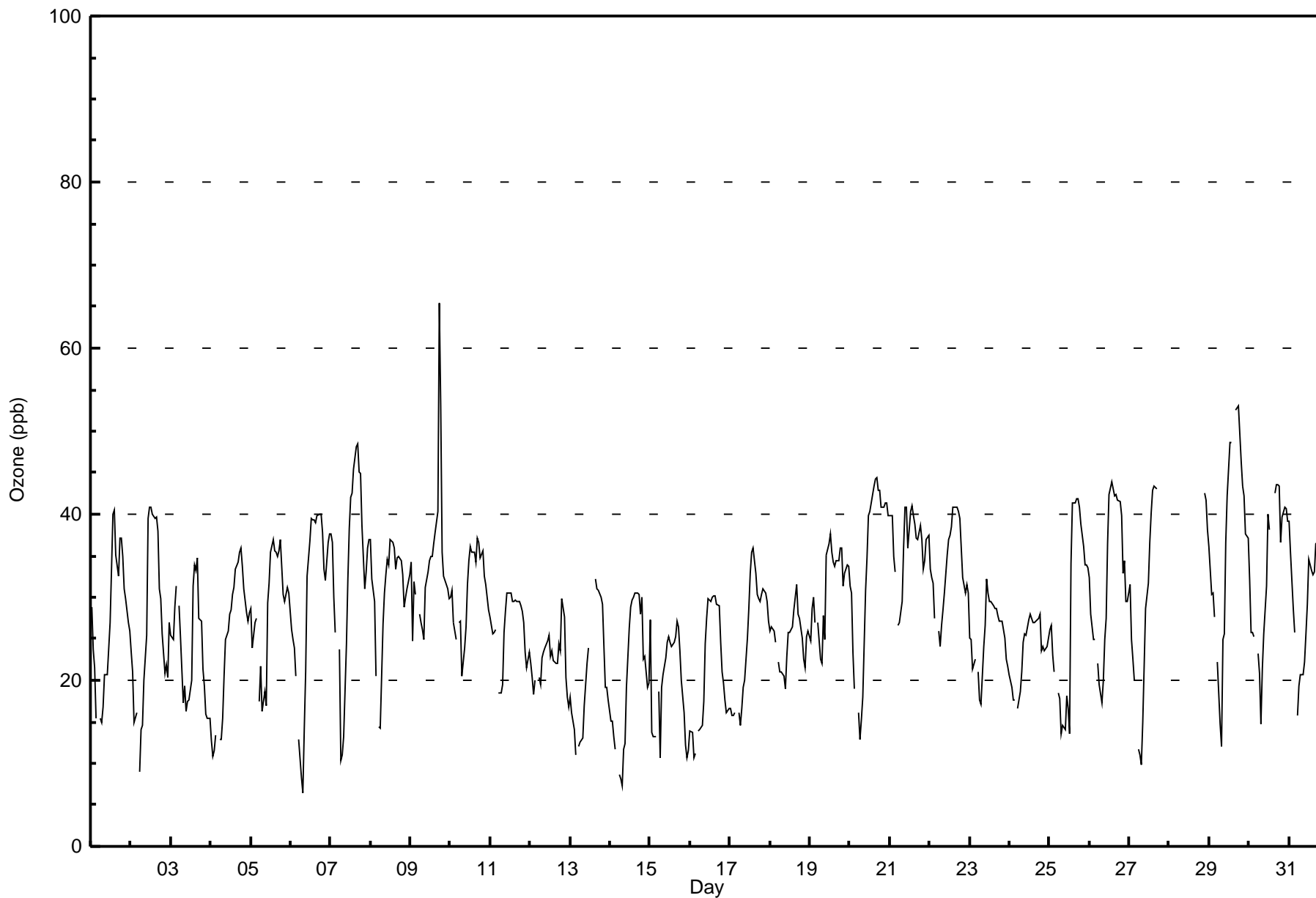
Maximum Value: 65.5 ppb on Aug 9 18:00	Maximum Daily Average: 36.4 ppb on Aug 21	Hours in Service: 744
Minimum Value: 6 ppb on Aug 6 08:00	Minimum Daily Average: 19.8 ppb on Aug 15	Hours of Data: 679
Maximum Diurnal Average: 36.0 ppb at hour 18	Minimum Diurnal Average: 17.4 ppb at hour 7	Hours of Missing Data: 65
Monthly Average: 28.09 ppb	Percentiles: P <sub>1</sub> = 10.0 P <sub>10</sub> = 15.8 Q <sub>1</sub> = 21.6 Median = 28.2 Q <sub>3</sub> = 34.6 P <sub>90</sub> = 40.0 P <sub>99</sub> = 48.6	Hours of Calibration: 38
		Percent Operational Time: 96.4

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	29	24	21	15	A	15	15	17	21	21	21	27	33	40	40	35	33	37	37	35	31	30	27	26	27.4	40.4
2-Aug	23	21	15	16	A	9	14	15	20	25	39	41	41	40	39	40	38	31	30	26	21	22	20	27	26.7	40.9
3-Aug	25	25	29	31	A	29	25	17	19	16	17	18	20	31	34	33	35	27	27	21	19	16	15	15	23.8	34.7
4-Aug	13	11	12	13	A	13	13	15	20	25	26	28	28	30	31	33	34	35	36	34	31	28	27	28	24.6	36.0
5-Aug	29	24	27	27	A	17	22	16	19	17	29	32	35	37	36	35	35	36	37	30	29	30	31	30	28.8	36.9
6-Aug	26	25	24	20	A	13	8	6	14	21	32	37	40	39	39	39	40	40	40	38	33	32	37	38	29.6	40.0
7-Aug	38	37	30	26	A	24	10	11	13	24	32	38	42	43	45	48	48	45	45	39	31	33	36	37	33.7	48.4
8-Aug	37	32	29	20	A	14	14	27	30	33	35	34	37	37	36	33	35	35	34	33	29	30	31	33	30.8	37.0
9-Aug	34	25	32	30	A	28	27	26	25	31	33	34	35	35	36	38	40	65	53	35	32	31	31	30	34.3	65.5
10-Aug	30	31	27	25	A	27	27	20	24	26	32	34	36	35	35	34	37	37	35	36	33	32	30	29	30.9	37.0
11-Aug	28	26	26	26	A	19	19	20	26	28	31	30	31	30	30	30	30	29	29	28	27	23	21	23	26.4	30.5
12-Aug	22	20	18	20	A	20	19	23	23	24	25	25	23	24	22	22	22	24	23	30	28	20	18	17	22.3	29.8
13-Aug	18	16	14	11	A	12	12	13	17	19	22	24	C	C	C	32	31	31	30	29	24	19	19	18	20.6	32.3
14-Aug	15	15	13	12	A	9	8	7	12	12	19	26	29	30	30	30	31	30	28	30	23	23	19	20	20.5	30.6
15-Aug	27	14	13	13	A	19	11	19	21	23	25	25	25	24	25	25	27	27	24	20	16	12	11	12	19.8	27.3
16-Aug	14	14	11	11	A	14	14	15	17	24	28	30	29	30	30	30	29	29	25	21	20	18	16	17	21.1	30.2
17-Aug	17	16	16	16	A	16	15	17	19	20	25	29	33	35	36	33	30	30	29	30	31	30	29	27	25.2	35.9
18-Aug	26	26	26	24	A	22	21	21	21	19	23	26	26	26	28	30	31	28	27	25	23	22	25	26	24.9	31.4
19-Aug	25	29	30	27	A	27	23	22	28	25	35	36	38	35	34	34	34	34	36	36	31	33	34	34	31.3	37.5
20-Aug	31	30	23	19	A	16	13	15	18	31	35	40	40	41	43	44	44	43	43	41	41	41	41	40	33.7	44.4
21-Aug	40	40	35	33	A	27	27	30	36	41	41	36	40	41	40	39	37	37	39	37	33	34	37	37	36.4	41.1
22-Aug	33	32	32	27	A	26	24	27	28	30	35	37	37	38	41	41	41	40	39	36	32	31	31	30	33.6	40.9
23-Aug	25	25	21	23	A	21	18	17	24	27	32	31	29	30	29	29	29	28	27	27	26	25	23	22	25.5	32.2
24-Aug	21	19	18	18	A	17	19	21	25	26	25	27	28	28	27	27	27	28	28	24	24	24	24	25	23.8	28.0
25-Aug	26	27	23	21	A	18	18	14	15	14	18	17	14	34	41	41	42	42	41	39	36	34	34	34	27.9	41.8
26-Aug	32	28	25	25	A	22	19	17	20	25	27	36	42	44	43	42	42	42	42	40	33	34	29	30	32.2	43.9
27-Aug	31	25	23	20	A	12	11	10	15	22	29	32	37	40	43	43	43	N	N	N	N	N	N	N	--	43.4
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	43	42	38	--	42.5
29-Aug	36	30	31	28	A	22	15	12	25	26	37	42	49	49	A	A	53	53	50	46	43	42	38	37	36.3	53.1
30-Aug	32	26	26	25	A	23	21	15	21	26	31	40	38	C	C	43	44	44	43	37	40	41	41	39	33.0	43.6
31-Aug	39	35	29	26	A	16	19	21	21	22	26	29	35	33	33	33	36	37	35	33	29	28	26	24	28.8	39.1
	27.4	24.9	23.3	21.7	--	18.9	17.4	17.5	21.2	24.1	28.8	31.4	33.4	35.0	35.1	35.1	35.9	36.0	34.9	32.2	29.3	28.7	28.1	28.0	Diurnal Average	
	39.9	39.9	34.9	33.0	--	28.9	27.2	29.5	35.9	40.9	40.9	42.1	48.6	48.6	45.5	48.1	52.5	65.5	53.1	46.3	43.3	42.5	41.7	39.9	Diurnal Maximum	

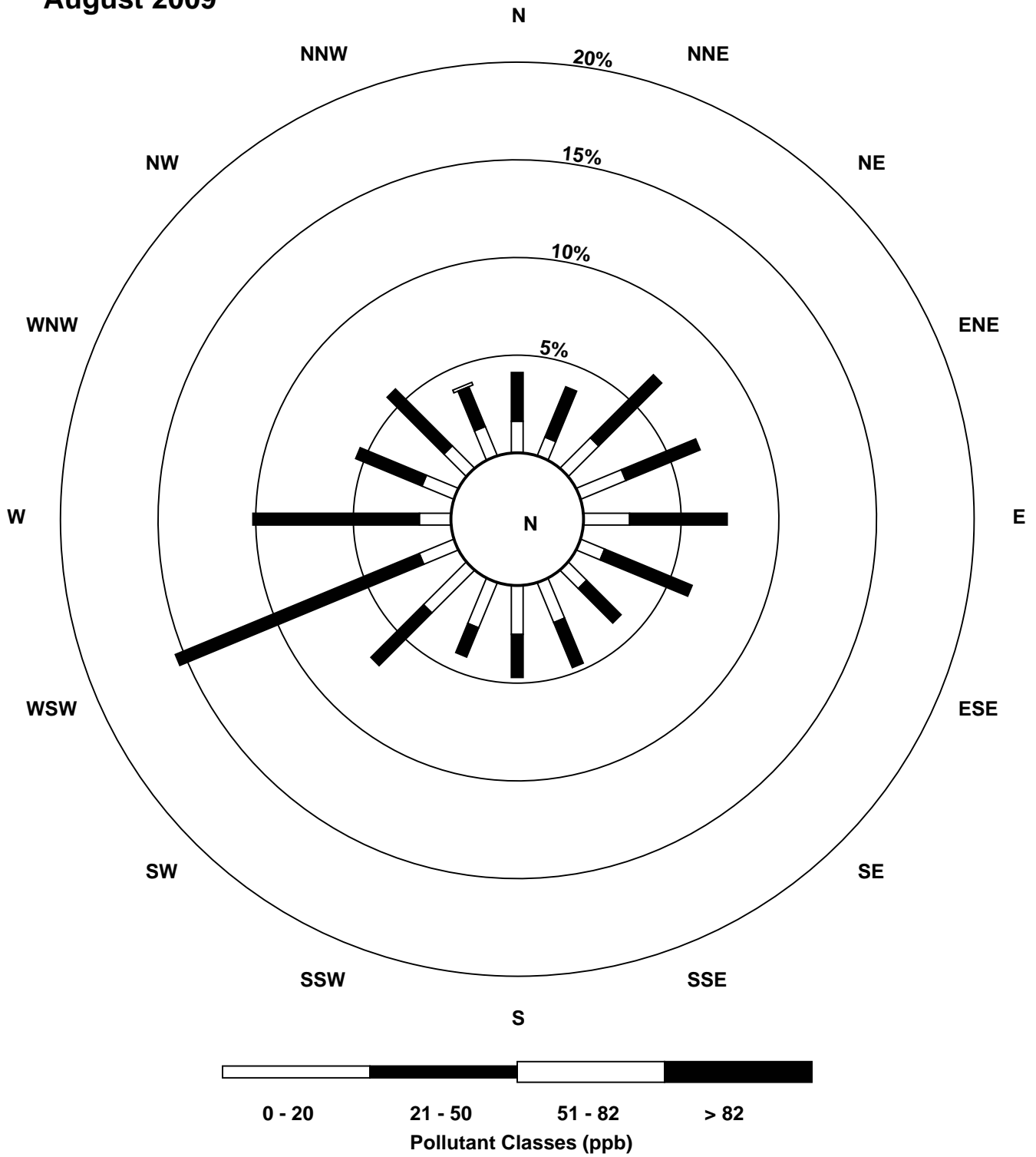
C - Calibration                      N - Not Valid                      A - Automated Daily Zero Span



# Hourly Maximums for O<sub>3</sub> at Beaverlodge August 2009



# Pollutant Rose for O<sub>3</sub> at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Eight Hour Running Averages**

**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 46.6 ppb on Aug 29 20:00	Hours of Data: 707
Minimum Value: 7.6 ppb on Aug 14 10:00	Hours of Missing Data: 37
	Hours of Calibration: 6
	Percent Operational Time: 95.8
Percentiles: P <sub>1</sub> = 10.9 P <sub>10</sub> = 14.9 Q <sub>1</sub> = 19.5 Median = 24.6 Q <sub>3</sub> = 30.4 P <sub>90</sub> = 35.4 P <sub>99</sub> = 41.7	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	30	28	25	23	22	20	18	16	15	15	15	17	18	21	24	26	28	30	32	33	33	32	30	29	32.8
2-Aug	27	26	23	20	19	16	14	12	11	12	15	19	21	25	29	32	34	35	34	32	29	27	25	23	34.6
3-Aug	22	22	22	23	23	24	24	23	22	21	20	18	18	17	19	21	22	23	25	25	25	23	21	19	24.9
4-Aug	17	15	13	12	12	11	11	11	12	14	16	18	19	21	24	26	28	29	30	31	31	31	30	30	31.0
5-Aug	28	27	25	24	23	21	19	16	14	13	14	15	18	21	24	27	30	32	33	33	31	31	30	30	32.9
6-Aug	28	27	26	25	25	22	19	15	13	12	13	15	17	21	25	29	33	36	37	37	36	35	34	34	37.1
7-Aug	33	32	31	29	29	27	23	19	16	14	15	17	20	23	28	32	37	40	42	42	41	40	38	37	41.8
8-Aug	36	34	32	30	30	27	24	21	20	20	21	23	25	28	30	32	33	33	33	33	32	31	31	31	35.7
9-Aug	30	28	28	27	27	27	26	24	24	24	25	26	27	28	30	32	33	35	36	36	35	34	33	32	35.7
10-Aug	30	28	25	23	21	21	21	20	19	19	21	23	25	26	27	29	31	32	33	33	33	32	32	31	33.2
11-Aug	30	29	28	27	26	24	22	20	20	21	22	23	25	26	28	29	29	29	29	28	28	27	26	25	30.3
12-Aug	24	23	21	20	19	19	19	19	19	20	21	21	22	22	22	22	22	22	22	22	22	21	20	20	23.8
13-Aug	19	18	17	15	14	13	12	12	12	12	13	15	15	16	N	N	N	N	N	N	27	26	25	23	26.9
14-Aug	21	19	17	15	15	13	11	9	8	8	8	10	12	15	18	21	24	26	27	27	26	25	23	22	27.4
15-Aug	21	18	17	16	15	14	13	13	12	13	14	16	17	18	20	22	23	23	23	22	21	20	18	17	23.4
16-Aug	15	13	12	11	11	11	11	11	12	13	15	18	19	21	23	25	27	28	27	26	25	23	22	20	27.8
17-Aug	18	17	16	15	15	14	14	14	14	15	16	18	19	22	24	27	28	29	30	30	30	30	29	28	30.4
18-Aug	28	28	27	27	26	25	24	23	22	21	20	20	21	21	22	23	24	25	26	26	25	25	24	24	28.0
19-Aug	23	23	23	23	23	23	21	19	20	19	19	21	23	25	28	31	32	33	34	34	33	32	31	30	33.9
20-Aug	29	28	26	24	23	20	17	14	13	13	16	19	21	25	29	34	37	40	41	41	41	41	41	41	41.2
21-Aug	40	40	39	38	37	35	32	30	29	29	30	31	33	35	37	37	37	37	37	37	36	35	35	35	40.1
22-Aug	34	33	33	32	32	30	29	27	27	26	27	28	29	31	33	34	36	37	38	38	37	36	35	32	37.9
23-Aug	30	28	25	23	22	20	19	17	17	18	20	21	22	24	25	27	28	28	28	27	27	26	25	25	30.0
24-Aug	24	22	21	20	19	18	17	16	17	17	19	20	21	22	24	25	26	26	26	26	25	25	24	24	26.4
25-Aug	24	24	23	23	23	22	21	19	17	15	14	13	12	14	17	21	24	28	31	34	37	38	37	36	37.6
26-Aug	34	32	30	28	28	26	23	20	19	18	18	19	22	25	29	32	35	38	40	40	39	37	35	33	40.2
27-Aug	31	28	25	23	22	19	17	14	12	12	13	15	18	22	26	30	34	36	38	N	N	N	N	N	37.9
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
29-Aug	N	N	33	32	32	28	24	19	16	16	17	19	22	26	29	33	38	43	46	47	45	43	42	40	46.6
30-Aug	36	33	30	28	27	25	22	21	20	20	20	22	24	24	26	30	35	38	40	39	39	40	40	39	39.9
31-Aug	39	37	36	34	33	29	25	22	19	18	18	20	23	25	27	29	31	32	32	32	32	31	30	29	38.6
	40.1	39.7	38.5	37.5	37.2	34.6	32.2	30.2	29.0	29.0	30.0	30.4	31.3	33.4	35.3	36.8	38.4	43.1	46.0	46.6	44.9	43.5	41.9	40.6	

N - Not Valid  
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

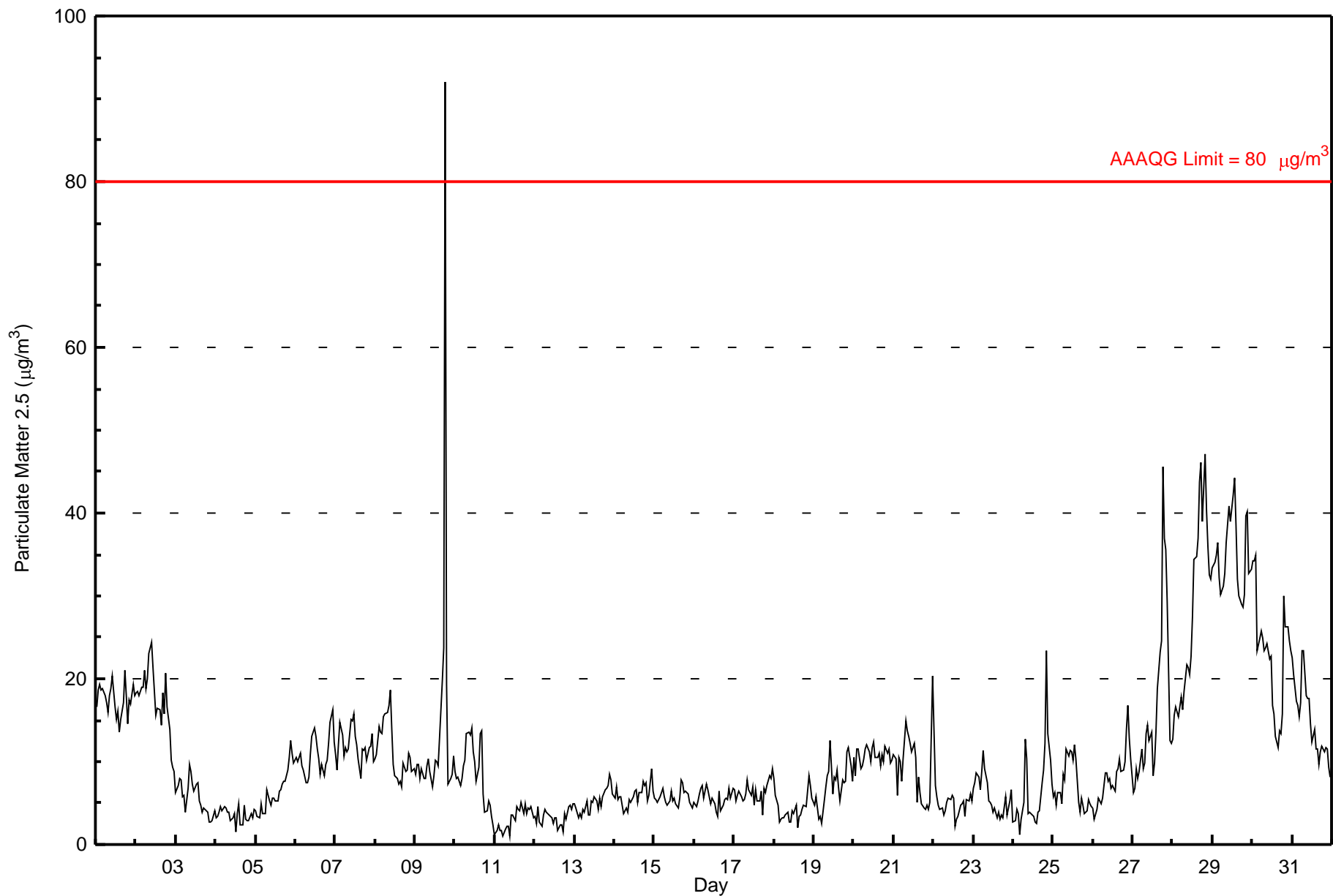
Number of Exceedances (AAAQO): 1-hr: 1 24-hr: 1	Hours in Service: 744
Maximum Value: 92.1 µg/m <sup>3</sup> on Aug 9 19:00	Maximum Daily Average: 35.0 µg/m <sup>3</sup> on Aug 29
Minimum Value: 1 µg/m <sup>3</sup> on Aug 11 06:00	Hours of Data: 744
Maximum Diurnal Average: 13.5 µg/m <sup>3</sup> at hour 19	Hours of Missing Data: 0
Monthly Average: 10.44 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 3.1 µg/m <sup>3</sup> on Aug 11	Percent Operational Time: 100.0
Minimum Diurnal Average: 9.1 µg/m <sup>3</sup> at hour 5	
Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 4.9 Median = 7.7 Q <sub>3</sub> = 12.4 P <sub>90</sub> = 20.6 P <sub>99</sub> = 40.9	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	17	19	19	19	19	18	17	16	18	19	20	17	15	16	14	15	17	21	18	15	18	17	19	18	17.5	21.0
2-Aug	18	18	18	19	19	21	19	20	23	24	21	19	16	17	16	14	18	16	21	17	14	10	9	9	17.3	24.4
3-Aug	6	7	8	8	6	6	4	7	10	9	7	6	7	7	5	5	4	4	4	4	3	3	3	4	5.7	9.6
4-Aug	3	3	4	5	4	5	4	4	4	3	3	4	2	4	5	2	2	5	3	3	3	4	3	4	3.6	4.9
5-Aug	4	3	3	5	4	4	4	7	5	5	6	6	5	5	6	7	7	8	8	9	10	12	11	10	6.4	12.5
6-Aug	10	10	11	11	10	9	7	7	8	11	13	14	13	12	10	9	10	8	10	10	12	15	16	12	10.8	16.2
7-Aug	11	9	12	15	13	11	12	11	11	15	15	16	13	12	10	8	12	11	12	10	12	12	13	10	11.9	15.8
8-Aug	10	11	14	14	13	15	16	16	17	19	14	10	8	8	7	8	7	10	9	9	11	11	9	9	11.4	18.6
9-Aug	9	10	10	8	9	8	8	9	10	9	7	8	10	10	9	13	20	24	92	19	7	8	8	11	14.0	92.1
10-Aug	9	8	8	7	8	10	10	13	13	13	14	11	10	8	9	13	14	6	4	4	5	5	3	2	8.7	14.1
11-Aug	1	2	2	2	2	1	2	2	2	1	4	4	3	5	4	4	5	4	5	4	4	4	5	3	3.1	5.2
12-Aug	3	2	5	3	2	4	4	4	4	4	3	2	3	3	2	2	1	4	3	5	5	4	5	5	3.3	4.9
13-Aug	5	4	3	4	3	4	4	5	4	4	5	5	6	5	4	6	5	6	7	7	7	8	8	6	5.2	8.4
14-Aug	6	7	5	6	6	4	4	4	4	5	5	6	6	7	5	6	6	8	7	7	5	6	9	6	5.9	9.2
15-Aug	6	6	5	6	6	7	6	5	5	5	6	5	6	5	4	6	8	7	6	6	6	5	5	4	5.7	7.8
16-Aug	5	5	5	6	7	7	6	7	7	6	5	6	5	4	3	6	4	5	5	6	5	7	6	7	5.6	7.2
17-Aug	7	5	6	6	6	5	5	6	8	7	6	7	5	7	5	5	6	3	7	6	7	8	8	9	6.3	9.2
18-Aug	8	6	5	3	3	3	3	4	4	3	3	4	4	5	2	3	3	4	5	5	7	8	7	6	4.4	8.3
19-Aug	5	6	4	3	3	2	5	7	8	9	13	6	8	8	9	7	5	8	7	8	11	12	9	8	7.2	12.6
20-Aug	11	8	11	12	9	9	10	12	12	11	10	12	12	10	11	11	9	11	10	12	11	12	10	10	10.7	12.3
21-Aug	11	10	6	10	10	8	10	15	14	13	12	11	12	11	5	8	6	5	4	4	5	4	5	20	9.2	20.3
22-Aug	14	7	6	5	4	4	4	4	5	6	5	6	6	2	3	3	5	5	3	5	5	6	5	5	5.2	13.8
23-Aug	7	8	9	8	7	9	11	9	8	5	5	5	4	4	3	4	3	4	3	6	4	4	5	7	5.9	11.4
24-Aug	3	3	4	4	1	3	5	13	10	4	4	4	3	3	3	4	4	7	9	12	23	13	10	7	6.5	23.3
25-Aug	6	6	5	6	6	5	8	8	12	11	11	11	10	12	10	5	4	6	5	4	4	5	5	5	7.1	12.0
26-Aug	4	3	4	6	5	5	6	9	9	8	8	7	7	7	9	9	10	9	9	10	14	17	13	10	8.2	16.7
27-Aug	6	7	9	8	9	11	9	10	13	14	13	14	8	10	14	19	23	25	46	37	36	29	12	12	16.4	45.7
28-Aug	13	16	17	15	17	18	16	18	22	21	20	23	27	34	35	37	44	46	39	47	40	36	33	32	27.8	47.1
29-Aug	33	34	35	36	32	30	31	33	36	39	41	39	42	44	39	32	30	29	29	30	40	40	33	33	35.0	44.2
30-Aug	34	34	35	23	25	26	25	23	24	24	22	23	17	16	13	12	14	13	16	30	26	26	25	23	22.9	35.0
31-Aug	22	21	17	17	15	17	23	23	18	18	18	15	12	14	11	12	10	11	12	11	12	11	9	8	14.9	23.4

9.9	9.6	9.9	9.6	9.1	9.3	9.7	10.7	11.2	11.0	11.0	10.4	9.9	10.1	9.3	9.5	10.3	10.6	13.5	11.5	12.0	11.7	10.4	10.2	Diurnal Average
34.3	34.3	35.0	36.4	32.3	30.2	31.3	32.7	36.5	38.6	40.8	38.9	42.3	44.2	38.5	37.0	43.7	46.1	92.1	47.1	40.4	40.1	32.7	33.3	Diurnal Maximum

Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

# Hourly Averages for PM<sub>2.5</sub> at Beaverlodge August 2009

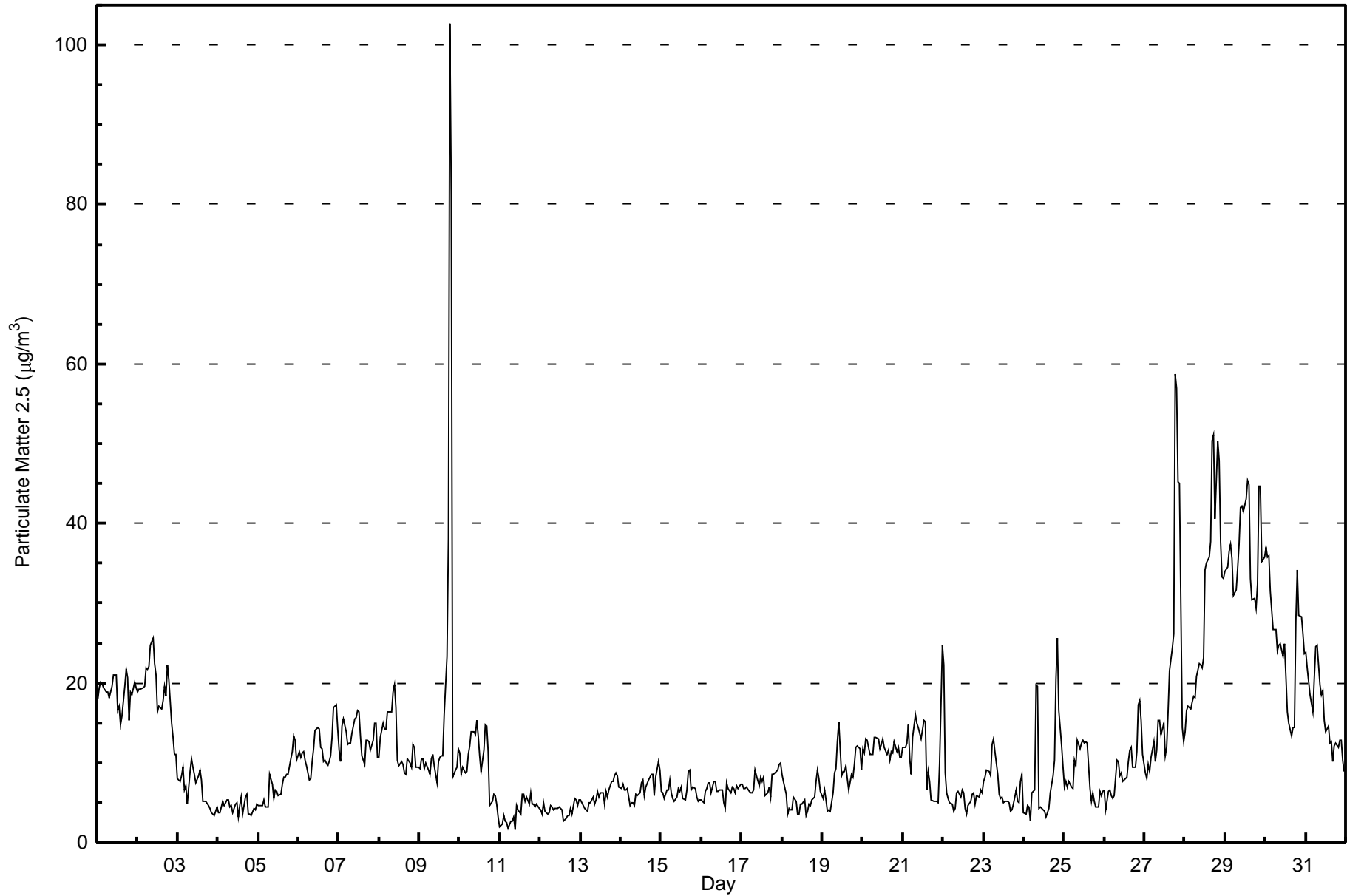


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

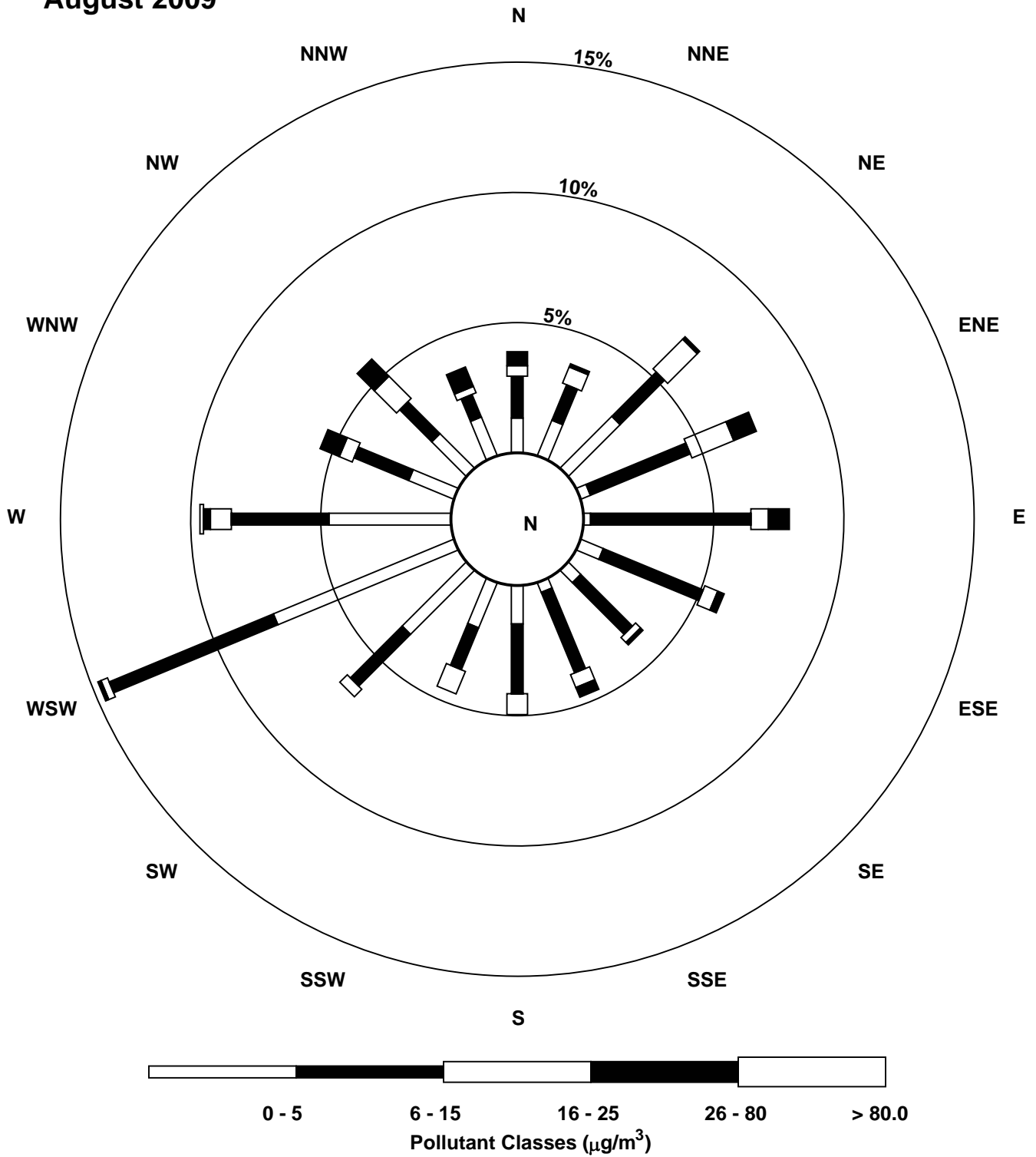
**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
August 1, 2009 to September 1, 2009**

Maximum Value: 102.7 µg/m <sup>3</sup> on Aug 9 19:00		Maximum Daily Average: 37.0 µg/m <sup>3</sup> on Aug 29		Hours in Service: 744																																												
Minimum Value: 2 µg/m <sup>3</sup> on Aug 11 10:00		Minimum Daily Average: 3.9 µg/m <sup>3</sup> on Aug 11		Hours of Data: 744																																												
Maximum Diurnal Average: 15.7 µg/m <sup>3</sup> at hour 20		Minimum Diurnal Average: 10.2 µg/m <sup>3</sup> at hour 5		Hours of Missing Data: 0																																												
Monthly Average: 11.91 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 5.8 Median = 8.8 Q <sub>3</sub> = 14.2 P <sub>90</sub> = 22.3 P <sub>99</sub> = 50.3		Hours of Calibration: 0																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	18	19	20	20	19	19	19	18	19	19	21	21	17	17	15	16	20	22	21	15	19	19	20	19	18.8	21.8																						
2-Aug	19	19	19	19	20	22	22	22	25	26	22	21	16	17	17	18	20	18	22	21	15	13	11	11	18.9	25.7																						
3-Aug	8	8	8	9	7	7	5	9	10	9	9	7	8	9	8	5	5	5	5	4	4	4	3	5	6.7	10.4																						
4-Aug	4	4	4	5	5	5	5	4	5	4	5	5	3	5	6	4	6	6	4	4	3	4	4	5	4.5	6.1																						
5-Aug	5	5	5	5	4	4	5	9	7	6	7	6	6	6	7	8	8	8	8	10	11	13	13	10	7.4	13.3																						
6-Aug	11	11	11	11	10	10	8	8	10	12	14	14	14	12	12	10	10	10	10	11	13	17	17	14	11.7	17.4																						
7-Aug	12	10	15	16	14	12	13	12	14	16	16	17	16	13	11	10	13	13	13	12	13	15	15	11	13.2	16.5																						
8-Aug	11	13	15	14	14	16	16	16	19	20	17	10	10	10	10	9	8	10	10	9	12	12	10	9	12.6	19.8																						
9-Aug	9	10	10	9	10	9	8	11	11	10	7	10	11	11	11	16	23	38	103	81	8	9	9	12	18.7	102.7																						
10-Aug	11	9	9	9	9	11	12	14	14	14	15	13	11	9	12	15	15	11	5	5	6	6	5	3	10.1	15.4																						
11-Aug	2	2	3	3	3	2	3	3	3	2	5	4	4	6	6	5	6	5	6	5	5	4	5	4	3.9	6.1																						
12-Aug	4	4	5	4	4	4	5	4	4	4	4	4	4	4	3	3	3	3	4	4	5	5	5	5	4.2	5.5																						
13-Aug	5	5	4	4	4	5	5	6	5	5	6	6	6	6	5	6	6	7	8	8	8	9	8	7	6.0	8.8																						
14-Aug	7	7	7	7	7	5	5	5	5	6	6	6	8	8	6	7	8	8	9	9	6	8	10	9	6.9	10.2																						
15-Aug	6	6	5	6	7	8	6	6	5	6	7	6	7	6	5	7	9	9	7	7	7	6	5	5	6.4	9.0																						
16-Aug	5	5	6	7	7	7	6	8	8	6	6	7	7	5	4	8	7	6	7	7	6	7	7	7	6.5	7.6																						
17-Aug	7	7	7	7	6	6	6	7	9	8	7	8	8	8	6	6	7	6	9	8	9	9	10	10	7.5	9.9																						
18-Aug	9	8	6	4	4	4	4	6	5	4	4	5	5	5	3	4	5	5	5	6	8	9	8	6	5.4	9.0																						
19-Aug	6	7	5	4	4	4	6	9	9	13	15	8	9	9	10	8	7	9	8	10	12	12	12	9	8.5	15.1																						
20-Aug	12	11	13	13	11	11	11	13	13	13	12	12	13	12	11	11	10	11	11	13	11	12	11	11	11.8	13.2																						
21-Aug	12	12	12	15	11	9	13	16	15	14	14	13	15	15	7	9	8	5	5	5	5	5	10	25	11.2	24.8																						
22-Aug	22	9	6	5	5	5	4	4	6	6	6	7	6	4	3	5	5	6	6	5	6	6	7	6	6.3	22.2																						
23-Aug	8	8	9	9	8	12	13	11	8	6	6	6	5	5	5	5	4	4	5	7	5	5	8	9	7.1	13.1																						
24-Aug	4	4	5	4	3	6	7	20	19	4	4	4	4	3	4	4	6	8	10	21	26	16	12	10	8.7	25.7																						
25-Aug	7	8	7	8	7	7	10	10	13	12	13	13	12	13	13	7	5	6	5	4	4	6	6	6	8.4	12.8																						
26-Aug	7	4	6	7	6	6	6	10	10	8	9	8	8	8	10	12	12	9	9	11	17	18	15	11	9.5	17.8																						
27-Aug	9	8	10	9	11	13	10	12	15	15	13	15	11	12	16	22	24	26	59	57	45	45	14	13	20.1	58.7																						
28-Aug	14	17	17	17	18	18	18	21	22	22	22	23	34	35	36	38	50	51	40	50	48	38	33	33	29.8	51.1																						
29-Aug	34	35	36	37	36	31	32	34	37	42	42	41	43	45	45	33	30	31	29	32	45	45	35	36	37.0	45.4																						
30-Aug	37	36	36	32	27	27	27	24	25	25	23	25	21	16	15	13	14	14	28	34	28	28	26	24	25.2	37.0																						
31-Aug	24	22	19	18	16	21	25	25	20	19	19	15	14	15	13	13	10	12	12	12	13	13	10	9	16.1	24.7																						
																								11.2	10.6	11.1	10.8	10.2	10.5	10.8	12.1	12.6	12.1	12.1	11.7	11.4	11.3	10.7	10.8	11.8	12.4	15.6	15.7	13.7	13.5	11.8	11.4	Diurnal Average
																								37.0	35.8	36.5	37.3	35.5	31.0	31.6	34.3	37.4	42.0	42.2	41.5	43.1	45.4	44.8	37.8	50.4	51.1	102.7	81.2	47.8	45.0	35.2	35.7	Diurnal Maximum

# Hourly Maximums for PM<sub>2.5</sub> at Beaverlodge August 2009



# Pollutant Rose for PM<sub>2.5</sub> at Beaverlodge August 2009



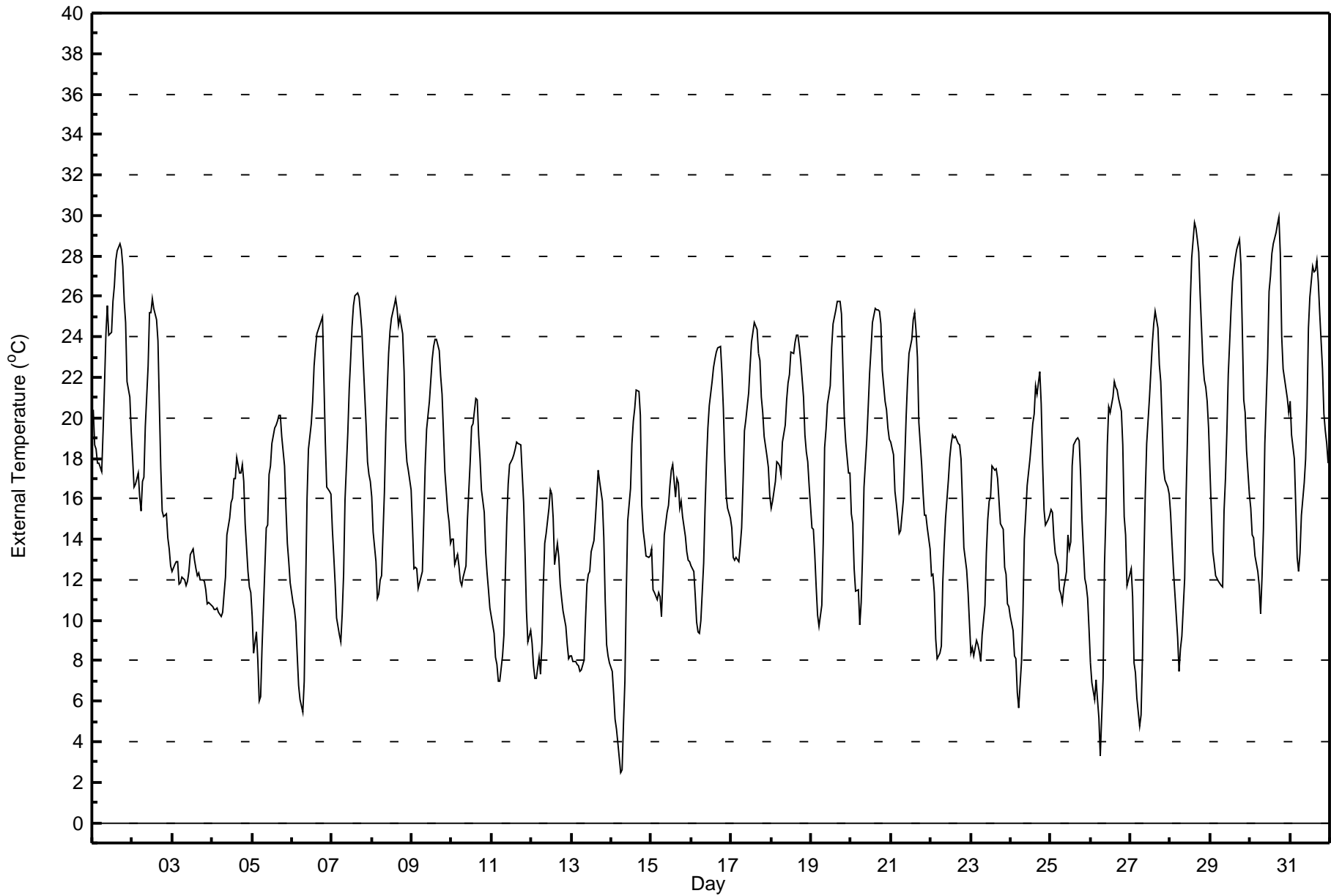


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

Maximum Value: 29.9 °C on Aug 30 18:00      Maximum Daily Average: 23.1 °C on Aug 1																						Hours in Service: 744 Hours of Data: 744				
Minimum Value: 2 °C on Aug 14 06:00      Minimum Daily Average: 11.1 °C on Aug 12 Maximum Diurnal Average: 22.4 °C at hour 16      Minimum Diurnal Average: 10.0 °C at hour 6 Monthly Average: 16.37 °C      Percentiles: P <sub>1</sub> = 5.1 P <sub>10</sub> = 8.8 Q <sub>1</sub> = 12.1 Median = 16.1 Q <sub>3</sub> = 20.5 P <sub>90</sub> = 24.5 P <sub>99</sub> = 28.8																						Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	20	19	18	18	18	17	19	22	24	26	24	24	26	26	28	28	29	28	28	26	25	22	21	19	23.1	28.6
2-Aug	18	17	17	17	16	15	17	17	20	23	25	25	26	25	25	24	21	18	15	15	15	14	14	13	18.8	25.9
3-Aug	12	13	13	13	12	12	12	12	12	12	12	13	14	13	13	12	12	12	12	12	11	11	11	11	12.1	13.5
4-Aug	11	11	11	11	10	10	10	11	12	14	15	16	16	17	17	18	17	17	18	17	15	12	12	11	13.7	18.1
5-Aug	10	8	9	8	6	6	9	11	15	15	17	18	19	19	20	20	20	20	19	18	16	14	13	12	14.2	20.1
6-Aug	11	11	10	8	7	6	5	7	12	16	18	20	21	23	23	24	24	25	25	22	19	17	16	16	16.1	25.0
7-Aug	15	13	12	10	9	9	10	12	16	19	21	23	24	26	26	26	26	25	24	23	20	18	17	17	18.4	26.1
8-Aug	16	14	13	11	11	12	12	16	19	21	23	24	25	26	26	25	25	25	24	22	19	18	17	16	19.3	25.9
9-Aug	15	13	13	13	12	12	12	15	18	19	21	22	23	24	24	24	23	22	21	19	17	15	15	14	17.7	23.9
10-Aug	14	14	13	13	13	12	12	12	13	15	16	18	20	20	21	21	19	18	16	15	13	12	12	11	15.1	21.0
11-Aug	10	9	8	8	7	7	8	9	12	15	17	18	18	18	18	19	19	19	17	16	13	10	9	9	13.1	18.8
12-Aug	9	8	7	7	8	7	9	12	14	14	16	16	16	15	13	14	13	12	11	10	10	9	8	8	11.1	16.5
13-Aug	8	8	8	8	8	8	8	8	10	12	12	12	13	14	15	16	17	17	16	14	11	9	8	8	11.2	17.4
14-Aug	8	6	5	5	4	2	3	5	7	11	15	17	19	20	20	21	21	20	16	14	14	13	13	13	12.2	21.4
15-Aug	14	12	11	11	11	11	10	12	14	15	16	17	17	18	16	17	17	16	16	15	14	13	13	13	14.1	17.7
16-Aug	13	12	11	10	9	9	10	13	16	18	20	21	22	23	23	23	23	24	22	20	18	16	16	15	16.9	23.5
17-Aug	15	13	13	13	13	14	15	17	19	20	21	23	24	24	25	24	23	23	21	20	19	18	18	16	18.7	24.7
18-Aug	16	16	17	18	18	18	17	19	20	21	22	22	23	23	24	24	24	24	23	21	19	18	18	17	20.0	24.1
19-Aug	15	14	13	12	10	10	11	14	19	19	21	22	23	25	25	25	26	26	25	23	20	19	17	17	18.7	25.8
20-Aug	15	15	13	11	12	10	11	13	17	19	21	22	23	25	25	25	25	25	25	22	21	20	19	19	18.9	25.4
21-Aug	19	18	16	16	15	14	14	16	18	20	22	23	24	25	25	24	23	20	18	16	15	15	15	14	18.6	25.2
22-Aug	12	12	11	9	8	8	9	12	14	15	17	18	19	19	19	19	19	18	16	14	12	11	10	10	14.2	19.1
23-Aug	8	9	8	9	9	8	8	9	11	13	15	16	16	18	17	17	17	16	15	15	13	12	11	11	12.5	17.6
24-Aug	10	9	8	8	6	6	8	10	14	15	17	18	19	20	20	22	21	22	21	18	15	15	15	15	14.7	22.2
25-Aug	16	15	14	13	13	12	11	11	12	12	14	14	14	18	19	19	19	19	17	15	12	12	11	10	14.2	19.0
26-Aug	8	7	6	7	6	5	3	7	13	15	19	21	20	21	22	22	21	21	20	19	15	14	12	12	14.0	21.8
27-Aug	13	11	8	7	6	5	5	8	13	16	19	21	22	24	25	25	24	23	22	20	17	17	17	16	16.0	25.3
28-Aug	15	14	12	10	9	8	9	9	12	16	19	23	26	28	30	29	29	28	26	23	22	22	21	20	19.1	29.7
29-Aug	17	13	13	12	12	12	12	12	15	17	19	22	25	27	27	28	28	29	28	24	21	20	18	16	19.5	28.8
30-Aug	16	14	14	13	12	12	10	12	15	19	23	26	27	28	29	29	30	30	28	24	22	21	21	20	20.7	29.9
31-Aug	21	19	18	16	13	12	13	15	17	18	20	24	26	28	27	27	28	27	25	22	20	19	19	18	20.6	27.7
13.5 12.5 11.8 11.1 10.5 10.0 10.4 12.2 14.8 16.8 18.6 19.9 21.0 21.8 22.1 22.4 22.1 21.5 20.4 18.6 16.6 15.5 14.7 14.1																						Diurnal Average				
20.8 19.1 18.5 17.8 17.8 17.6 19.4 21.7 24.1 25.6 25.2 26.2 27.0 28.2 29.7 29.4 29.6 29.9 28.1 25.8 24.7 21.8 21.0 20.3																						Diurnal Maximum				

# Hourly Averages for External Temperature at Beaverlodge August 2009

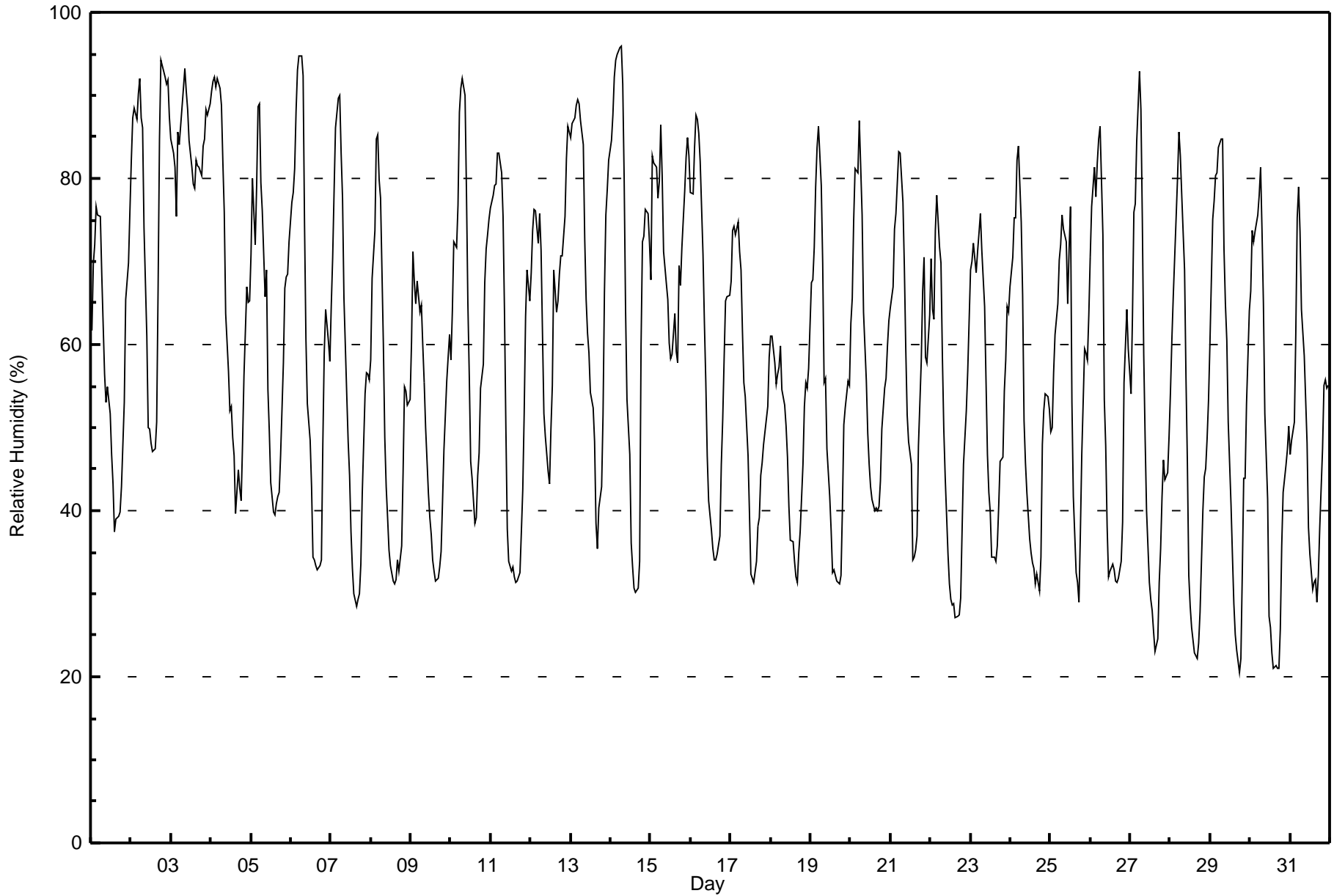


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Relative Humidity (RH) - %  
August 1, 2009 to September 1, 2009**

Maximum Value: 95.9 % on Aug 14 07:00																				Maximum Daily Average: 84.4 % on Aug 3					Hours in Service: 744		
Minimum Value: 20 % on Aug 29 18:00																				Minimum Daily Average: 48.3 % on Aug 30					Hours of Data: 744		
Maximum Diurnal Average: 82.1 % at hour 6																				Minimum Diurnal Average: 36.4 % at hour 16					Hours of Missing Data: 0		
Monthly Average: 58.52 %																				Percentiles: P <sub>1</sub> = 22.6 P <sub>10</sub> = 32.5 Q <sub>1</sub> = 42.0 Median = 58.2 Q <sub>3</sub> = 75.2 P <sub>90</sub> = 84.7 P <sub>99</sub> = 94.2					Hours of Calibration: 0		
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	62	70	72	77	76	75	68	62	56	53	55	52	47	43	37	39	40	43	48	53	65	70	76	57.5	76.6		
2-Aug	82	87	88	87	90	92	87	86	74	61	50	50	48	47	48	51	67	85	94	92	91	92	87	76.3	94.2		
3-Aug	85	83	81	75	86	84	86	91	93	91	88	84	81	79	79	82	82	81	80	84	85	88	88	89	84.4	93.1	
4-Aug	90	92	92	91	92	91	89	82	76	64	57	52	52	49	47	40	45	43	41	48	56	67	65	65	66.1	92.2	
5-Aug	71	80	72	79	89	89	79	76	66	69	55	49	43	40	39	41	42	42	47	58	67	68	68	72	62.5	88.9	
6-Aug	77	78	81	88	93	95	95	92	75	61	53	49	43	34	34	33	33	33	34	48	59	64	60	58	61.3	94.8	
7-Aug	65	70	79	86	90	90	83	78	66	54	48	44	37	33	30	29	29	30	34	42	54	57	56	56	55.8	90.0	
8-Aug	58	68	74	85	85	80	78	60	49	43	39	35	33	32	31	32	34	33	36	45	55	54	53	53	51.8	85.2	
9-Aug	60	71	67	65	68	64	65	60	55	50	42	39	37	34	33	32	32	33	35	41	47	56	59	61	50.2	71.1	
10-Aug	58	64	72	72	77	88	91	92	90	78	65	56	46	44	38	39	44	47	55	58	67	71	73	75	65.1	92.0	
11-Aug	76	78	79	79	83	83	81	75	64	50	38	34	33	33	32	31	32	33	37	42	52	63	69	65	56.0	83.1	
12-Aug	69	74	76	76	72	76	71	61	52	49	45	43	50	55	69	64	65	69	71	71	75	82	86	86	66.9	86.2	
13-Aug	85	87	87	89	90	89	87	84	73	65	61	59	54	52	48	38	35	40	43	51	66	76	79	82	67.6	89.5	
14-Aug	85	88	92	94	95	96	96	91	80	64	53	47	36	33	31	30	31	34	60	72	73	76	76	72	66.9	95.9	
15-Aug	68	83	82	81	78	80	86	80	71	67	65	60	58	59	64	59	58	69	67	72	79	82	85	83	72.4	86.4	
16-Aug	78	78	84	88	87	85	82	71	63	55	47	41	38	35	34	34	35	37	46	51	58	65	66	66	59.3	87.6	
17-Aug	68	74	74	73	75	71	69	62	55	54	47	40	32	32	31	34	38	39	44	46	48	51	53	58	52.8	74.8	
18-Aug	61	61	58	55	56	57	60	55	53	50	46	41	36	36	34	32	31	35	37	46	53	55	55	57	48.4	61.0	
19-Aug	67	68	72	79	84	86	79	70	55	56	47	42	38	33	33	32	31	31	32	40	50	52	56	55	53.7	86.3	
20-Aug	63	66	75	81	81	87	81	76	64	56	49	46	43	41	40	40	40	41	43	50	55	56	60	63	58.1	87.0	
21-Aug	64	67	74	76	80	83	83	77	69	59	52	48	46	34	34	35	37	48	58	67	71	59	58	64	60.1	83.2	
22-Aug	70	64	63	74	78	72	70	59	50	44	35	31	29	29	29	27	27	27	29	38	46	52	57	63	48.4	78.0	
23-Aug	69	70	72	69	71	73	76	71	65	56	47	42	40	34	34	34	36	40	46	46	54	58	65	64	55.5	75.7	
24-Aug	67	71	75	75	82	84	75	66	51	46	42	37	35	34	33	31	32	30	34	48	52	54	54	52	52.5	83.9	
25-Aug	49	50	57	61	65	70	72	76	74	72	65	71	77	53	42	33	31	29	37	47	59	59	58	64	57.1	76.6	
26-Aug	71	77	81	78	82	85	86	73	53	48	38	32	33	33	33	31	31	32	34	39	55	60	64	59	54.5	86.3	
27-Aug	54	63	76	77	84	93	88	75	59	49	40	31	29	28	25	23	25	31	35	42	46	44	45	49	50.5	92.9	
28-Aug	54	61	66	75	80	86	83	78	69	56	46	32	29	26	23	23	22	24	28	40	44	45	49	53	49.6	85.5	
29-Aug	60	75	77	80	81	84	85	85	72	65	61	51	41	35	29	25	23	20	22	33	44	44	53	64	54.5	84.8	
30-Aug	66	74	72	73	76	78	81	74	65	52	41	27	26	23	21	21	21	21	21	26	36	42	45	47	50	48.3	81.4
31-Aug	47	48	51	61	75	79	74	64	59	53	48	38	35	30	31	32	29	32	38	47	55	56	55	55	49.7	78.9	
																								Diurnal Average			
																								Diurnal Maximum			
67.7 72.2 74.9 77.4 80.6 82.1 80.2 74.3 65.0 57.7 50.5 45.3 42.1 38.9 37.6 36.4 37.4 39.7 44.1 51.2 58.5 61.9 63.6 65.1																											
90.5 91.8 92.3 94.2 94.9 95.8 95.9 92.4 93.1 90.5 88.3 84.5 81.3 79.4 78.9 82.2 81.5 84.7 94.2 93.5 92.3 91.3 91.9 89.0																											

# Hourly Averages for Relative Humidity at Beaverlodge August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

Beaverlodge  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

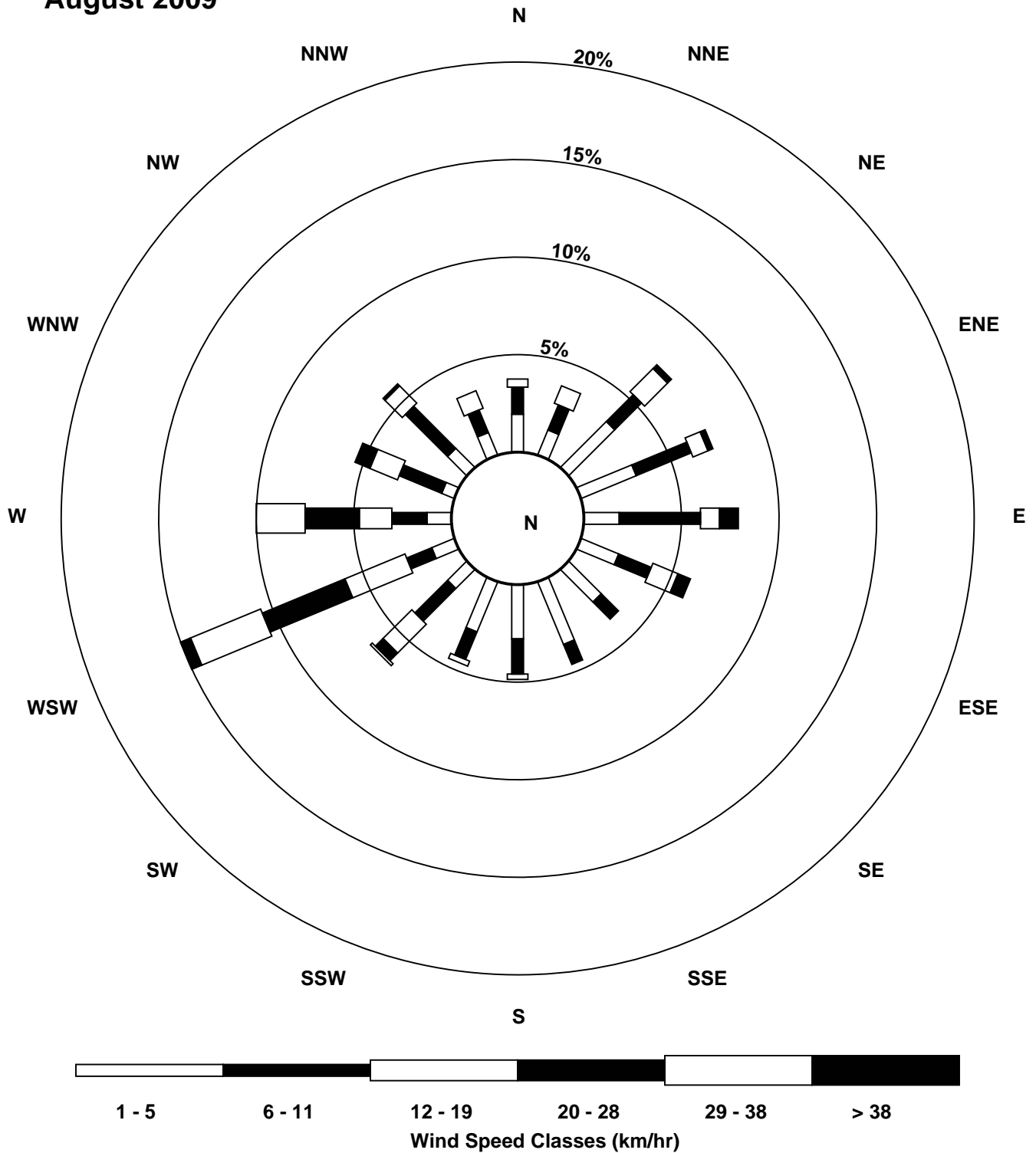
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	4	2	5	5	4	2	3	6	13	17	18	21	20	24	20	20	17	11	6	5	7	6	2	6.8	24.3
Dir	86	53	118	54	52	57	37	93	336	305	287	294	271	269	272	289	297	305	352	333	340	41	57	112	303.8	271.9
2 Spd	3	4	4	9	2	3	3	5	8	9	8	15	9	6	13	19	23	13	20	7	13	11	11	8	7.5	23.2
Dir	56	76	60	23	213	129	36	158	155	174	143	61	47	19	31	53	67	63	59	86	75	80	92	94	71.2	67.1
3 Spd	7	11	8	11	10	11	11	12	17	18	17	18	17	23	23	18	13	11	11	11	8	5	5	4	11.2	22.8
Dir	73	62	80	86	81	59	48	55	60	44	60	62	43	39	35	26	8	358	352	357	10	1	8	346	41.4	35.3
4 Spd	4	7	6	8	9	12	11	12	14	16	16	16	18	15	14	10	14	11	7	7	4	6	7	7	9.7	17.7
Dir	338	326	344	27	34	33	33	43	38	45	47	51	39	53	32	32	45	54	66	93	58	39	39	42	39.9	38.7
5 Spd	4	1	4	2	1	1	1	3	2	7	11	15	12	10	9	10	10	11	9	6	6	7	8	8	5.3	14.8
Dir	54	230	26	30	254	219	229	225	184	181	121	115	118	114	106	116	100	81	109	141	88	67	71	75	106.0	115.2
6 Spd	7	6	2	3	2	1	3	4	2	3	5	7	7	4	3	6	5	4	3	6	5	6	7	6	3.4	7.0
Dir	75	73	94	165	131	172	93	162	197	154	134	171	163	147	142	101	77	139	138	154	108	77	63	67	117.9	163.1
7 Spd	3	1	1	0	1	1	1	3	2	3	5	8	10	9	9	10	12	14	12	9	8	8	9	8	5.4	13.6
Dir	77	151	243	123	76	99	85	180	164	159	170	176	138	130	131	135	123	111	117	125	89	80	81	82	120.8	110.6
8 Spd	5	4	3	3	4	2	4	4	11	14	22	29	32	31	30	38	28	26	22	13	13	9	6	6	12.9	37.5
Dir	114	197	151	80	60	99	52	209	216	233	255	266	269	258	256	245	241	247	244	246	251	268	294	271	250.5	244.6
9 Spd	2	2	2	5	7	8	1	1	5	21	23	22	16	22	18	23	26	28	28	14	9	1	1	5	10.6	28.5
Dir	226	144	44	338	314	299	136	65	233	244	244	256	248	253	244	254	267	261	261	259	252	152	22	59	257.5	260.5
10 Spd	6	2	2	5	11	11	7	1	9	14	18	20	25	23	23	20	23	19	15	30	18	18	10	10	11.6	29.9
Dir	49	40	352	339	303	307	5	224	216	221	231	234	249	259	252	265	238	235	233	233	212	218	222	193	242.6	233.3
11 Spd	11	10	9	9	8	5	4	8	14	19	32	34	37	37	39	38	35	32	28	23	18	11	2	4	18.6	38.8
Dir	206	218	212	220	232	205	163	195	205	220	243	249	251	251	250	241	247	255	243	240	241	242	213	209	239.4	250.2
12 Spd	14	11	9	11	15	6	9	16	28	25	26	20	15	15	16	19	20	18	16	12	8	6	5	6	11.4	28.2
Dir	236	234	231	223	235	249	252	255	269	280	278	297	329	335	332	334	325	330	334	338	322	323	307	293	292.0	268.9
13 Spd	6	8	8	6	6	5	7	7	3	2	2	3	4	3	5	4	3	9	9	8	6	6	8	8	1.9	8.7
Dir	300	323	327	319	322	8	4	29	43	105	122	108	188	313	40	242	159	101	118	152	103	83	73	75	48.4	100.5
14 Spd	6	4	3	2	2	0	2	1	4	4	5	6	5	4	3	5	5	7	16	3	4	3	7	5	2.3	15.7
Dir	79	100	145	171	213	338	9	191	210	180	172	167	157	183	159	132	144	171	264	105	76	178	294	147	170.3	264.5
15 Spd	1	7	3	3	4	5	5	9	16	14	14	14	15	14	15	13	14	11	12	8	6	5	3	6	7.2	16.3
Dir	66	196	178	195	300	280	242	264	253	258	282	291	294	307	314	315	291	278	274	251	227	222	170	183	273.0	252.7
16 Spd	5	4	2	2	3	3	2	2	3	9	13	13	11	13	15	13	15	15	13	18	16	7	8	6	6.8	18.1
Dir	205	197	142	94	61	65	66	134	234	273	288	292	294	284	275	282	267	252	250	240	245	218	215	201	258.5	239.8
17 Spd	7	4	3	3	11	7	7	6	12	14	27	41	46	38	36	35	37	34	33	35	35	27	20	13	21.1	45.6
Dir	196	133	151	194	230	219	219	217	240	236	246	252	249	255	262	264	261	259	255	255	258	257	261	248	251.4	249.5
18 Spd	7	13	23	35	34	30	27	31	32	33	33	26	31	25	29	32	31	22	13	6	6	7	8	10	21.4	35.2
Dir	248	259	257	260	265	265	261	267	269	269	278	290	277	288	280	277	278	284	305	280	291	289	354	27	274.8	259.5
19 Spd	3	5	2	2	5	1	0	3	2	6	9	12	7	2	7	10	7	7	5	4	6	3	6	6	0.8	11.8
Dir	51	51	184	35	33	15	296	54	113	167	156	170	169	257	259	252	292	20	26	39	38	43	45	38	70.6	170.0
20 Spd	4	4	1	1	2	1	3	1	1	11	16	17	20	21	21	21	20	21	22	23	23	25	24	21	12.6	24.8
Dir	41	20	203	136	305	203	302	224	193	112	100	96	109	110	111	104	103	95	89	89	87	91	92	91	96.9	90.6
21 Spd	18	9	12	12	1	10	7	9	12	7	10	14	11	27	23	22	37	24	22	12	9	26	15	20	9.7	36.5
Dir	91	81	350	29	259	281	359	310	314	316	261	241	212	260	266	248	246	232	215	179	199	248	227	241	250.3	245.8
22 Spd	20	14	12	5	3	13	14	15	16	23	35	39	38	32	27	28	31	31	26	18	9	8	6	5	18.6	39.2
Dir	242	260	261	223	209	237	246	253	226	236	247	254	252	248	253	254	253	245	252	267	284	323	346	309	252.0	253.7

**Peace Airshed Zone Association  
Summary of Hourly Averages**

Beaverlodge  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	2	4	1	1	3	3	3	6	7	17	26	29	34	35	37	34	31	22	27	21	15	12	16	14.8	36.7
Dir	341	122	165	290	127	174	97	146	186	188	229	237	251	243	260	256	254	246	243	253	249	246	234	234	244.0	255.7
24 Spd	13	14	9	7	3	1	4	1	24	27	25	26	22	17	12	7	6	2	4	6	7	9	12	14	6.9	27.3
Dir	237	241	267	270	247	292	247	219	262	265	268	270	259	272	258	281	271	317	113	88	71	95	106	104	258.4	265.3
25 Spd	17	17	10	9	9	4	4	9	6	3	5	1	3	4	25	35	32	30	26	20	11	13	10	4	6.7	35.0
Dir	106	98	104	79	72	144	66	311	319	270	301	79	137	276	255	251	249	249	255	241	252	271	258	272	249.4	251.0
26 Spd	2	2	3	3	4	3	3	3	1	3	2	4	7	6	5	3	5	8	6	2	4	5	4	3	1.5	8.0
Dir	100	134	104	7	244	55	157	87	167	165	241	155	165	177	162	212	227	184	183	280	69	356	19	5	162.7	184.4
27 Spd	2	7	1	4	1	1	3	3	2	3	6	9	10	9	10	9	13	8	8	8	9	9	12	11	5.2	12.6
Dir	349	328	11	7	180	188	67	62	117	178	172	139	116	113	94	100	108	100	74	68	79	82	84	91	94.5	107.9
28 Spd	8	5	3	1	1	1	2	1	3	2	3	4	4	5	6	12	17	15	9	10	10	10	7	3	4.4	16.7
Dir	107	160	204	46	193	45	16	61	208	170	180	175	156	154	124	118	89	90	97	63	66	52	76	154	102.2	89.0
29 Spd	5	3	3	1	1	2	2	4	3	8	8	8	10	12	11	9	7	6	4	2	0	6	4	4	4.8	11.5
Dir	262	4	4	19	2	332	340	286	321	293	308	304	299	306	297	303	329	335	324	337	326	296	6	320	311.4	305.8
30 Spd	3	3	1	1	4	4	3	2	8	9	9	22	21	16	17	15	7	3	4	4	5	3	2	4	4.0	21.6
Dir	269	248	338	54	55	59	64	113	193	207	215	253	263	264	258	255	239	273	160	103	62	86	53	33	246.6	253.2
31 Spd	7	11	14	5	3	2	1	5	6	11	9	8	8	6	13	10	9	12	11	12	12	9	9	6	6.2	14.2
Dir	309	323	324	321	236	189	5	323	294	311	317	323	317	321	288	327	0	7	15	22	29	26	48	101	340.7	324.3
Spd	0.9	0.5	1.2	1.1	1.8	1.6	1.2	1.9	4.8	6.5	8.3	8.7	9.0	9.1	9.8	9.6	8.7	6.9	5.3	4.1	1.5	1.0	1.5	1.4	Diurnal Average	
Dir	160.0	237.4	275.9	319.2	277.0	282.3	319.9	263.6	250.1	247.5	251.7	255.8	255.8	263.6	267.3	263.9	262.3	259.0	255.3	241.7	252.8	283.3	61.9	107.5	Diurnal Maximum	
Spd	20.1	17.4	22.9	35.2	34.4	30.4	27.2	31.0	31.7	33.0	34.7	41.4	45.6	37.6	38.8	38.4	37.0	34.0	32.9	34.5	35.2	26.6	24.0	21.1	Diurnal Maximum	
Dir	241.7	98.1	257.4	259.5	265.3	264.8	260.6	267.0	269.2	268.8	246.9	251.5	249.5	254.8	250.2	240.8	260.7	259.3	254.7	254.9	257.5	257.0	92.5	90.5	Diurnal Maximum	
Maximum Speed Value: 46 km/h on Aug 17 13:00																		Minimum Speed Value: 0 km/h on Aug 7 04:00						Hours in Service: 744		
Maximum Daily Speed Average: 21.4 km/h on Aug 18																		Minimum Daily Speed Average: 0.8 km/h on Aug 26						Hours of Data: 744		
Maximum Diurnal Speed Average: 9.8 km/h at hour 15																		Minimum Diurnal Speed Average: 0.5 km/h at hour 2						Hours of Missing Data: 0		
Monthly Average Velocity: 4.08 km/h 259.24 deg																		Speed Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 3.9 Median = 8.0 Q <sub>3</sub> = 15.1 P <sub>90</sub> = 24.8 P <sub>99</sub> = 37.1						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	26	19	6	0	0	0	51																			
NorthEast	44	32	23	5	0	0	104																			
East	27	48	16	12	0	0	103																			
SouthEast	40	20	6	0	0	0	66																			
South	41	26	2	0	0	0	69																			
SouthWest	34	22	30	17	11	1	115																			
West	14	25	34	40	39	5	157																			
NorthWest	14	43	19	3	0	0	79																			
Total	240	235	136	77	50	6	744																			

# Wind Rose for WS at Beaverlodge August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Beaverlodge - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 46 km/h on Aug 17 13:00	Maximum Daily Speed Average: 23.0 km/h on Aug 18	Hours in Service: 744
Minimum Speed: 1 km/h on Aug 20 04:00	Minimum Daily Speed Average: 4.9 km/h on Aug 26	Hours of Data: 744
Maximum Diurnal Speed Average: 18.7 km/h at hour 17	Minimum Diurnal Speed Average: 6.1 km/h at hour 7	Hours of Missing Data: 0
Monthly Average Speed: 11.57 km/h	Percentiles: P <sub>1</sub> = 1.8 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 5.1 Median = 8.6 Q <sub>3</sub> = 15.5 P <sub>90</sub> = 25.9 P <sub>99</sub> = 37.7	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	5	3	5	5	4	3	4	8	14	17	18	21	20	25	21	21	18	11	6	6	7	6	3	10.6	24.6
2-Aug	3	4	4	10	6	5	6	7	8	9	10	16	10	7	13	20	23	13	21	9	14	11	11	8	10.3	23.4
3-Aug	7	11	8	12	10	11	11	13	17	18	17	18	17	23	23	18	13	11	12	11	8	6	5	5	12.7	22.9
4-Aug	4	7	6	8	9	12	11	12	15	17	16	16	18	16	15	10	14	11	8	7	4	6	7	7	10.6	18.1
5-Aug	6	1	4	2	3	1	3	3	4	8	12	16	13	11	10	10	11	11	9	6	6	7	8	8	7.2	15.6
6-Aug	7	6	4	3	3	2	3	4	3	3	5	7	8	5	6	7	6	5	4	7	6	6	7	6	5.1	7.8
7-Aug	3	2	2	2	2	3	2	4	2	4	6	9	10	10	10	10	12	14	13	10	8	8	9	8	6.7	13.7
8-Aug	5	4	4	4	4	3	4	5	11	14	22	30	33	31	30	38	28	26	22	13	13	9	6	6	15.2	37.7
9-Aug	5	4	3	6	7	8	2	3	5	21	23	22	16	22	18	24	26	28	29	14	9	2	3	5	12.8	28.6
10-Aug	6	4	6	8	11	12	8	4	9	15	19	20	25	23	23	20	24	19	15	30	18	18	10	10	14.9	30.2
11-Aug	11	10	9	10	8	5	4	8	14	19	32	34	37	38	39	39	35	33	28	23	18	11	4	6	19.8	39.2
12-Aug	14	11	9	11	15	8	9	17	28	25	27	21	16	16	17	19	20	18	16	13	9	6	6	6	14.8	28.3
13-Aug	6	8	8	6	6	6	7	7	3	3	3	3	5	7	7	6	6	9	9	8	6	6	8	8	6.3	9.5
14-Aug	6	4	3	2	2	2	4	4	4	4	5	7	6	5	7	7	8	8	17	5	4	5	7	6	5.6	17.1
15-Aug	5	7	4	3	6	10	6	9	17	15	15	14	15	14	16	14	14	11	12	8	6	5	3	6	9.7	16.7
16-Aug	5	4	3	3	3	3	3	2	4	9	13	14	12	14	16	14	16	15	13	18	16	7	8	6	9.3	18.2
17-Aug	7	5	4	4	11	7	7	6	12	14	27	42	46	38	36	35	37	34	33	35	35	27	20	14	22.4	45.8
18-Aug	8	13	24	35	34	30	27	31	32	33	33	27	31	26	30	32	31	22	13	6	6	7	10	10	23.0	35.3
19-Aug	4	5	3	4	5	3	2	3	3	6	9	12	8	7	9	11	9	8	5	4	6	5	6	7	6.1	12.5
20-Aug	6	6	3	1	2	4	4	2	4	12	16	18	20	22	22	21	20	21	22	23	23	25	24	21	14.2	24.9
21-Aug	18	18	14	13	6	11	11	10	13	7	11	16	15	28	24	22	37	24	22	12	10	26	15	20	16.8	36.7
22-Aug	20	14	12	5	4	13	14	15	16	23	35	39	38	32	28	28	31	31	26	18	9	9	7	6	19.8	39.4
23-Aug	5	4	4	3	3	4	4	3	7	7	19	26	29	34	36	37	34	31	22	28	21	15	12	16	16.8	37.1
24-Aug	13	14	9	7	5	6	5	6	24	27	25	26	23	18	13	9	7	4	4	6	8	10	12	14	12.3	27.4
25-Aug	17	18	10	10	9	10	5	9	7	3	5	5	4	7	25	35	32	31	26	20	12	14	10	7	13.8	35.3
26-Aug	6	4	4	6	4	4	4	3	2	4	3	5	8	7	6	6	6	8	6	4	4	7	5	4	4.9	8.4
27-Aug	3	8	3	4	2	2	4	4	3	4	7	10	10	10	11	10	13	8	8	8	9	9	12	11	7.2	12.9
28-Aug	8	7	3	3	2	3	4	2	3	2	3	4	5	5	7	13	17	15	9	10	10	10	8	5	6.6	16.9
29-Aug	6	5	5	3	3	5	5	5	3	8	8	9	10	12	12	10	8	7	4	4	3	6	7	5	6.4	12.0
30-Aug	6	3	2	2	4	4	3	2	8	10	10	22	21	17	18	16	9	4	4	5	5	3	2	5	7.8	22.2
31-Aug	7	11	14	5	4	2	3	5	6	11	10	8	9	9	14	12	10	12	11	12	12	9	9	6	8.8	14.2
	7.4	7.3	6.3	6.4	6.4	6.5	6.1	6.8	9.6	11.9	15.0	17.3	17.5	17.3	18.3	18.5	18.7	16.6	14.7	12.3	10.4	9.7	8.7	8.2	Diurnal Average	
	20.2	18.0	23.5	35.3	34.5	30.4	27.3	31.1	31.8	33.2	35.0	41.6	45.8	38.1	39.2	38.9	37.3	34.2	33.0	34.6	35.3	26.7	24.0	21.2	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using scalar methods



**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Beaverlodge - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 94.4 deg on Aug 9 08:00																								Hours in Service:	744
Minimum Value: 1.9 deg on Aug 11 21:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 3.3 P <sub>10</sub> = 5.5 Q <sub>1</sub> = 8.8 Median = 17.2 Q <sub>3</sub> = 39.1 P <sub>90</sub> = 65.1 P <sub>99</sub> = 86.3																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	72	59	48	9	12	24	77	36	45	12	10	9	10	10	9	16	14	26	9	14	34	18	7	60	77.2
2-Aug	20	13	11	26	84	56	82	48	13	16	38	21	26	32	17	8	9	34	9	36	17	8	8	11	83.7
3-Aug	30	18	9	21	13	11	6	16	6	10	11	8	13	9	5	5	10	13	6	7	10	18	19	39	39.2
4-Aug	22	6	12	12	5	4	8	7	7	10	14	16	11	19	16	21	13	16	23	7	16	5	5	6	23.3
5-Aug	57	91	50	52	77	77	65	12	86	23	21	18	18	25	25	26	25	18	15	11	27	5	4	3	90.6
6-Aug	5	5	62	21	51	64	38	14	47	37	31	23	31	53	67	36	54	39	40	16	23	9	6	7	66.7
7-Aug	24	79	78	88	43	59	65	41	33	33	20	14	21	21	20	24	17	7	7	7	15	4	5	5	87.7
8-Aug	31	26	41	39	19	48	12	47	14	7	11	10	8	9	9	6	8	10	6	4	4	8	16	10	47.7
9-Aug	72	61	73	75	40	23	77	94	42	7	7	11	16	13	17	13	8	5	6	9	8	76	70	13	94.4
10-Aug	9	84	67	46	10	20	24	84	10	10	9	12	8	13	13	16	14	9	9	7	9	8	9	12	84.3
11-Aug	7	10	12	30	25	49	19	12	11	15	8	11	9	10	8	9	9	8	5	3	2	15	65	62	65.4
12-Aug	4	28	5	5	4	72	6	6	5	8	9	22	17	14	12	12	10	8	8	11	11	8	15	4	71.7
13-Aug	11	9	5	15	13	13	15	9	37	60	73	48	47	76	46	59	77	23	27	13	18	10	5	4	77.4
14-Aug	6	16	33	33	45	77	59	75	18	21	39	33	59	66	69	48	55	30	35	62	10	56	44	34	77.5
15-Aug	70	8	21	35	46	60	16	6	12	19	14	14	20	17	13	14	16	10	8	9	9	8	19	11	70.5
16-Aug	12	18	35	39	19	16	28	41	47	18	18	24	27	29	22	25	17	12	7	3	3	12	7	14	46.7
17-Aug	7	42	48	30	12	22	11	13	19	6	8	5	6	9	8	6	8	5	4	4	4	4	9	12	47.9
18-Aug	15	14	25	4	4	4	3	5	5	6	7	11	7	15	18	11	8	9	11	14	10	4	39	15	39.4
19-Aug	58	16	63	78	23	72	78	26	27	18	20	20	28	90	48	29	40	32	49	15	8	83	24	43	89.6
20-Aug	63	65	67	64	58	62	65	83	73	31	11	13	10	11	11	10	9	6	5	3	3	5	3	4	83.0
21-Aug	5	74	28	8	92	16	48	21	16	32	26	23	38	9	16	10	6	6	8	17	21	12	13	4	91.9
22-Aug	5	10	24	19	55	6	5	8	10	9	8	6	8	9	11	10	8	8	7	4	6	25	31	41	55.5
23-Aug	73	67	45	74	81	48	45	33	15	22	26	12	11	8	8	8	9	8	5	5	4	6	6	4	80.5
24-Aug	6	5	16	19	85	88	49	83	6	7	9	12	13	23	25	59	51	66	37	13	5	11	3	4	87.9
25-Aug	4	9	20	20	27	63	44	13	24	22	13	93	43	78	17	8	9	9	6	6	19	18	17	69	92.8
26-Aug	81	56	30	64	39	48	45	26	67	59	74	54	23	44	58	82	45	23	21	62	36	44	36	44	81.8
27-Aug	68	43	80	51	50	73	37	41	45	28	21	22	22	27	21	31	13	12	7	5	4	4	4	4	80.3
28-Aug	12	39	35	79	51	86	65	82	54	40	35	39	41	36	33	17	7	6	18	9	5	6	28	45	85.5
29-Aug	26	53	65	82	92	83	84	51	44	16	10	13	19	16	20	22	23	23	8	72	87	19	57	52	92.2
30-Aug	56	57	69	83	17	18	24	35	17	13	11	15	13	23	19	21	43	51	20	39	7	31	29	36	83.1
31-Aug	20	4	2	60	59	68	78	31	14	9	14	24	28	50	32	28	29	10	9	4	3	12	19	33	78.4
80.7	90.6	80.3	87.7	92.2	87.9	83.6	94.4	86.1	59.6	74.0	92.8	58.7	89.6	68.6	81.8	77.4	65.6	48.7	71.7	87.0	83.2	69.5	68.6		

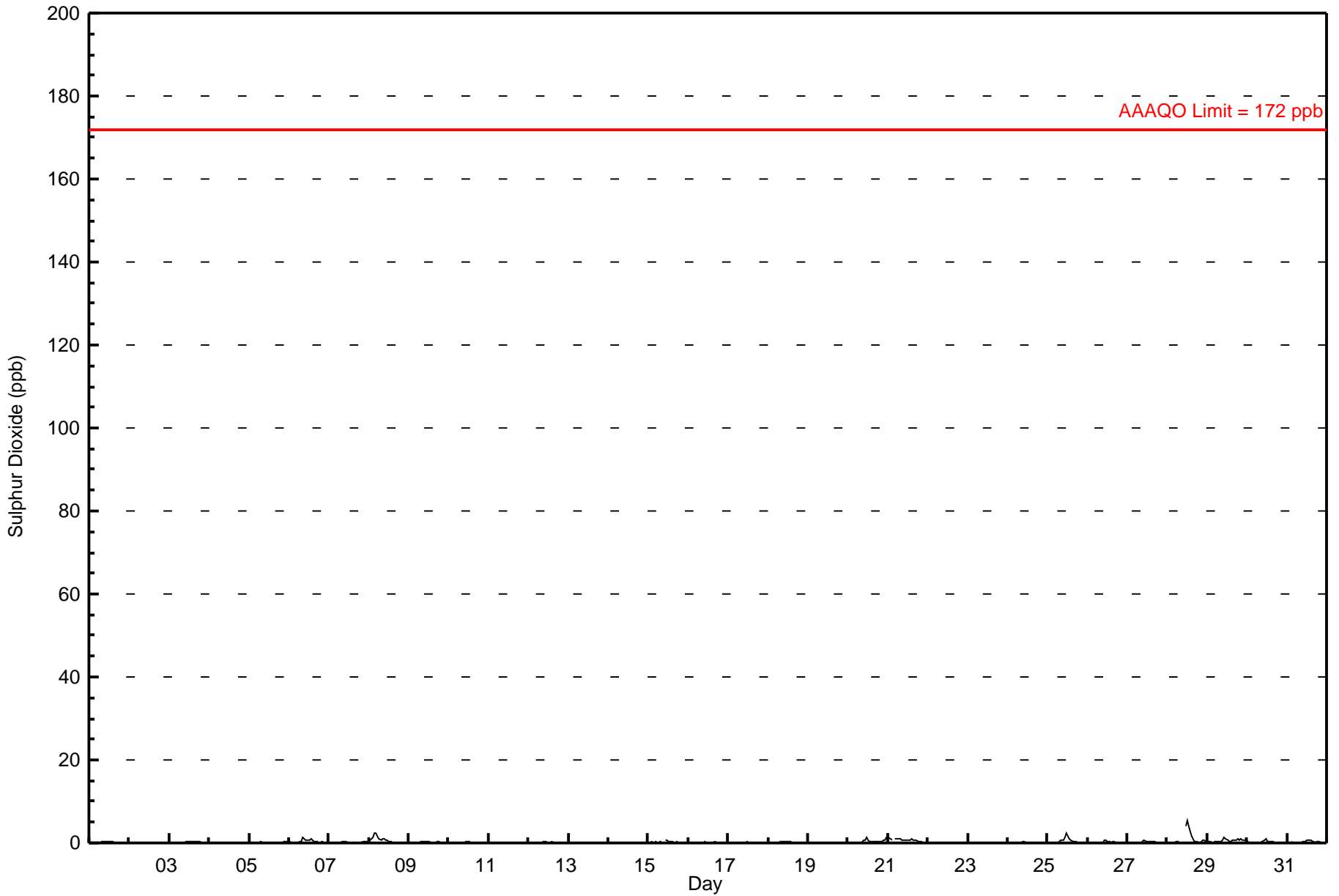
# PASZA

## Portable – Kinuso Station

### Monthly Summary Tables, Graphs and Roses



# Hourly Averages for SO<sub>2</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Kinuso - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

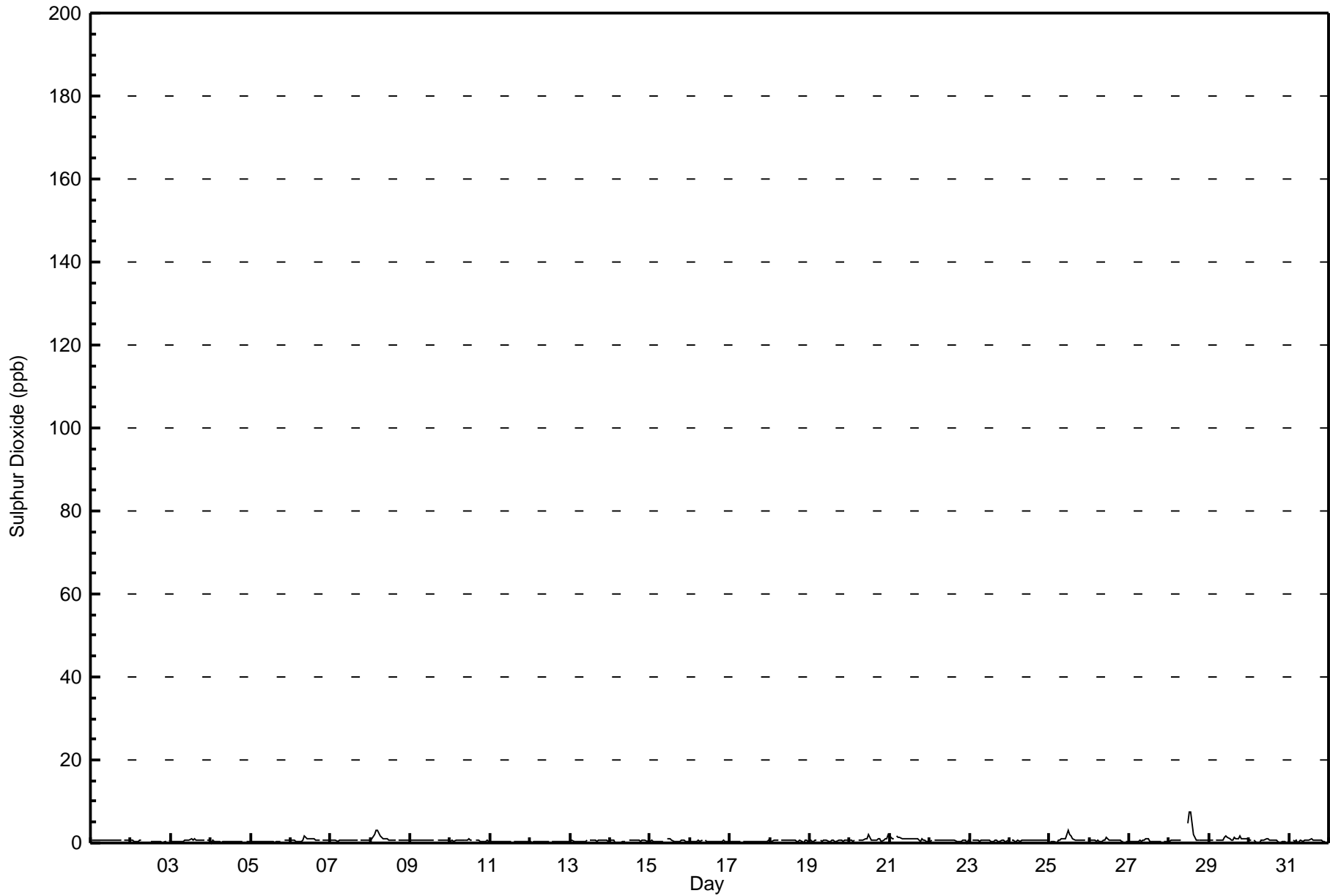
Maximum Value: 7.5 ppb on Aug 28 14:00	Maximum Daily Average: 1.6 ppb on Aug 28	Hours in Service: 744
Minimum Value: 0 ppb on Aug 14 06:00	Minimum Daily Average: 0.4 ppb on Aug 4	Hours of Data: 705
Maximum Diurnal Average: 0.9 ppb at hour 12	Minimum Diurnal Average: 0.5 ppb at hour 23	Hours of Missing Data: 39
Monthly Average: 0.61 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.5 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.8	Hours of Calibration: 34
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.5	0.6	
2-Aug	1	1	1	0	0	1	1	P	P	P	P	P	0	0	0	0	1	0	0	0	0	1	1	A	1	0.5	0.5	
3-Aug	1	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.5	1.0		
4-Aug	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5	
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.5	0.7	
6-Aug	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.8	
7-Aug	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.5	0.5	
8-Aug	1	1	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	3.0	
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.5	0.5	
10-Aug	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	1	1	0.5	1.0	
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	
12-Aug	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.5	
13-Aug	0	1	1	1	0	0	0	1	0	0	1	A	1	1	1	1	0	1	1	1	1	1	1	0	0	0.5	0.5	
14-Aug	1	1	1	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	0.4	0.5	
15-Aug	1	1	1	0	0	0	0	0	0	A	1	1	1	1	0	0	0	1	1	1	1	1	0	0	1	0.6	1.0	
16-Aug	0	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.5	0.5	
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	0.5	
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	0	0	0.5	0.5	
19-Aug	1	0	0	1	1	A	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	0.5	0.5	
20-Aug	1	1	0	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	0.8	2.0	
21-Aug	2	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1.0	1.8	
22-Aug	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	1	0.5	0.5	
23-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0	1	0.5	0.6	
24-Aug	A	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.6	
25-Aug	0	0	0	0	0	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	A	1	0.9	3.1
26-Aug	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0.6	1.5	
27-Aug	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	1.0	
28-Aug	1	1	1	1	1	1	1	1	C	C	C	5	7	8	2	1	1	1	1	1	1	1	1	1	1	1.6	7.5	
29-Aug	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.0	1.7	
30-Aug	1	1	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.1	
31-Aug	1	A	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.1	

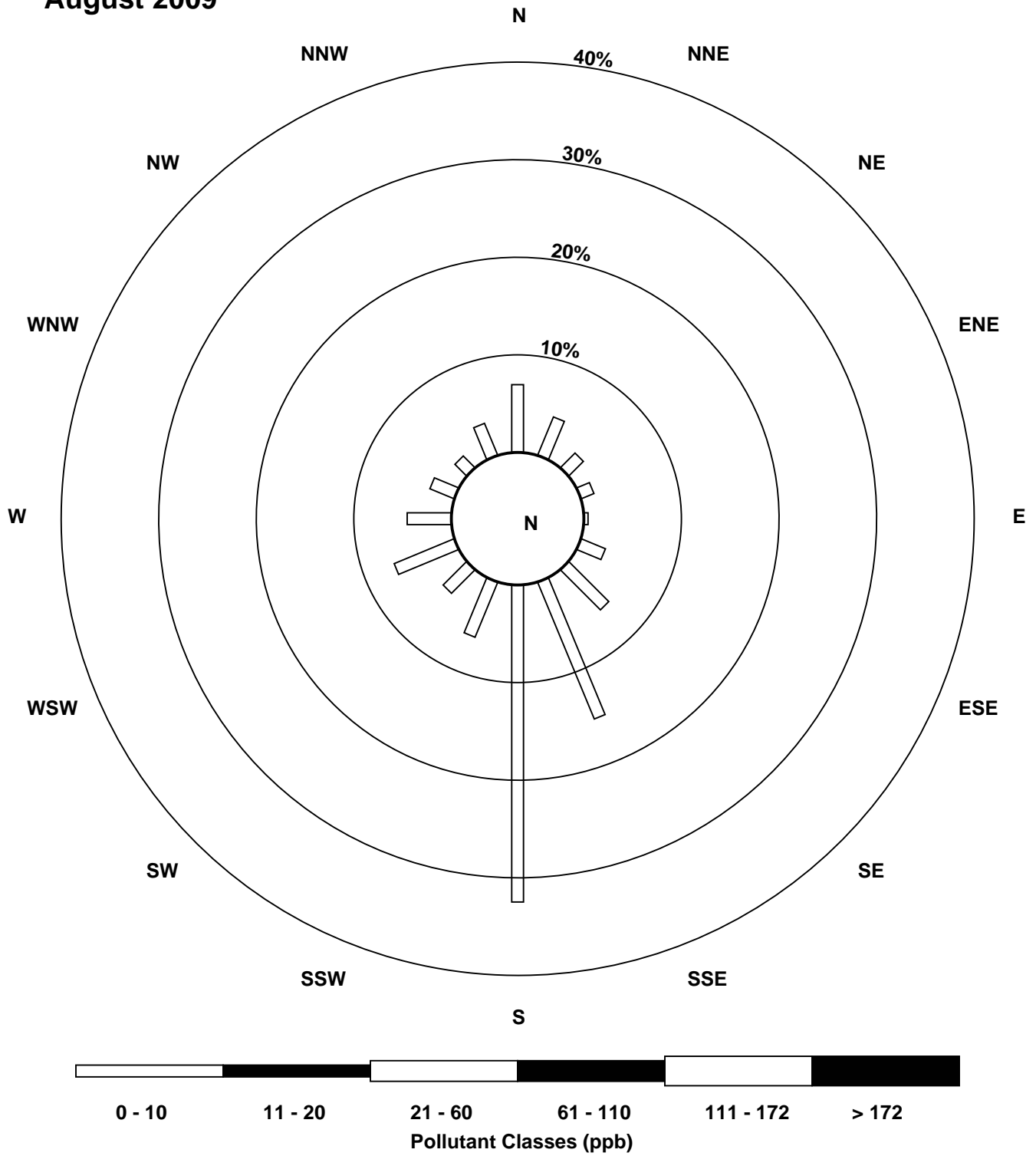
0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.8	0.9	0.9	0.9	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	Diurnal Average	
1.8	1.0	2.0	3.0	3.0	2.2	1.5	1.1	1.8	1.5	2.1	4.7	7.4	7.5	2.2	1.2	1.2	1.2	1.6	1.2	1.2	1.2	1.1	1.1	2.0	Diurnal Maximum		

C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span

# Hourly Maximums for SO<sub>2</sub> at Portable-Kinuso August 2009



# Pollutant Rose for SO<sub>2</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb  
August 1, 2009 to September 1, 2009**

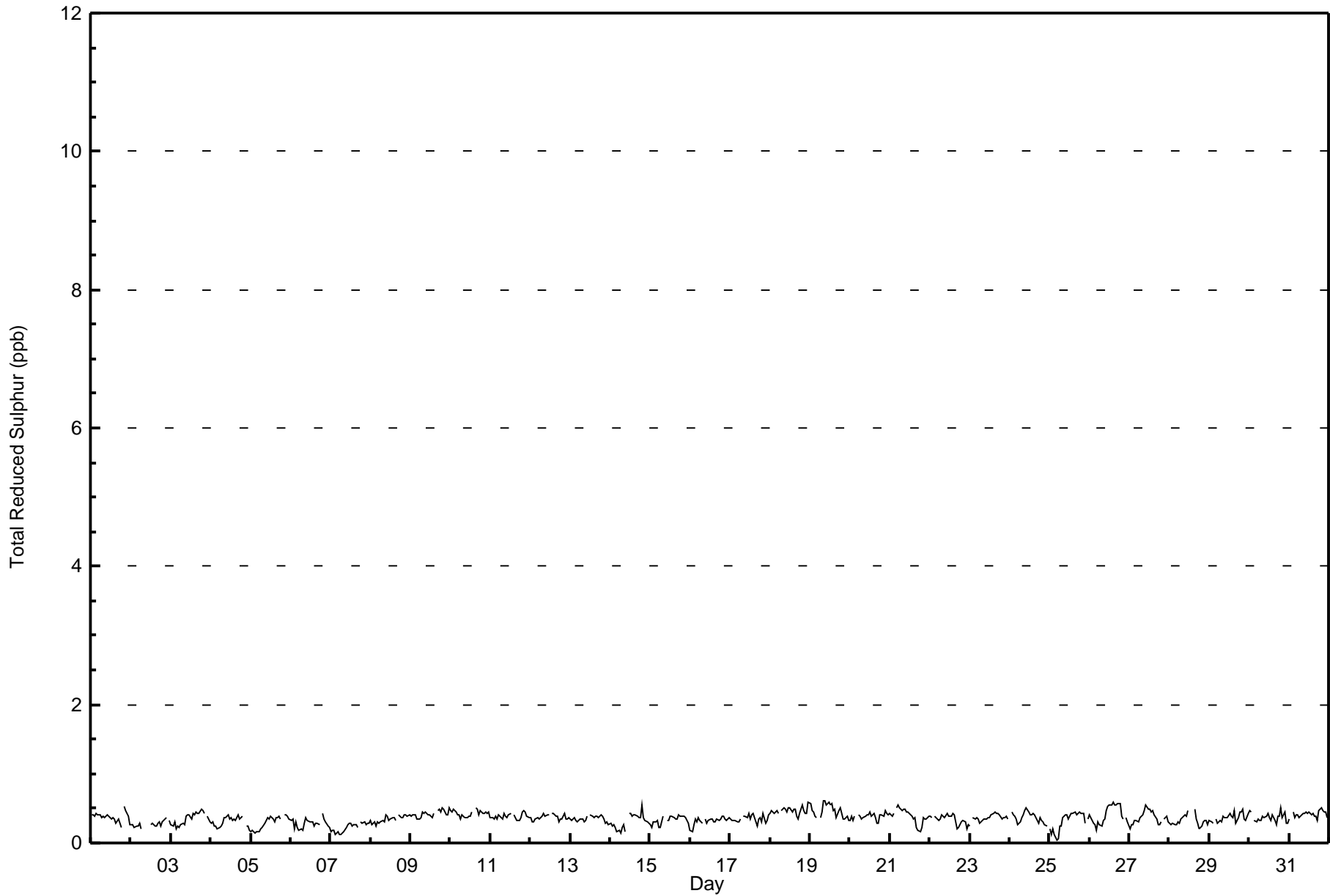
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 0.6 ppb on Aug 19 09:00	Maximum Daily Average: 0.5 ppb on Aug 19
Minimum Value: 0 ppb on Aug 25 05:00	Hours of Data: 705
Minimum Daily Average: 0.2 ppb on Aug 7	Hours of Missing Data: 39
Maximum Diurnal Average: 0.4 ppb at hour 12	Hours of Calibration: 34
Monthly Average: 0.36 ppb	Percent Operational Time: 99.3
Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.4	0.5
2-Aug	0	0	0	0	0	0	0	0	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.5
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0.4	0.5
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.6
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
18-Aug	0	0	0	0	0	0	A	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0.5	0.6
19-Aug	1	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0.5	0.6
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
21-Aug	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
24-Aug	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.5
26-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0.4	0.6
27-Aug	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.5
29-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
30-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
31-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.5
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	Diurnal Average	
	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	Diurnal Maximum	

C - Calibration      P - Power Failure      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb



# Hourly Averages for TRS at Portable-Kinuso August 2009



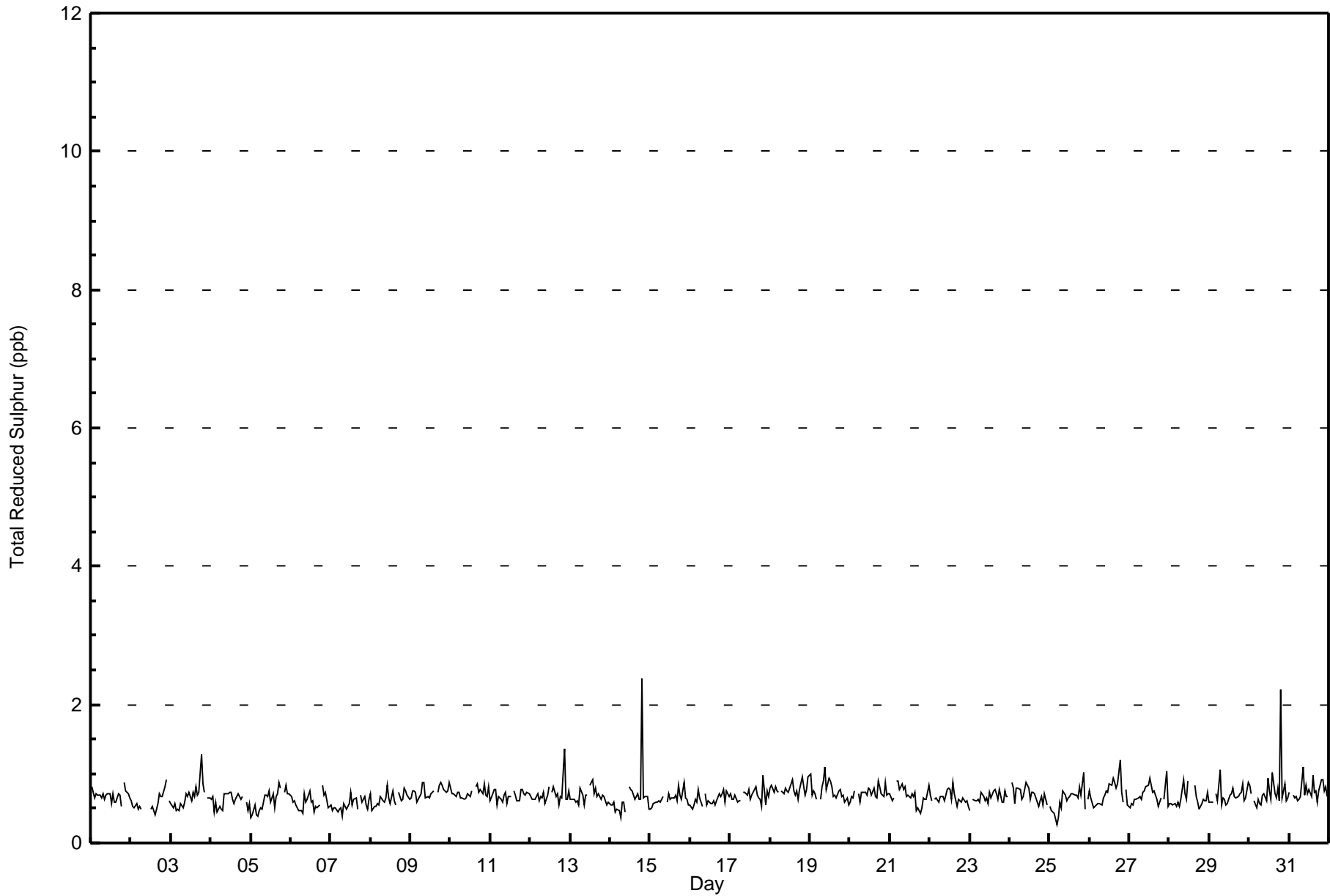
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb  
August 1, 2009 to September 1, 2009**

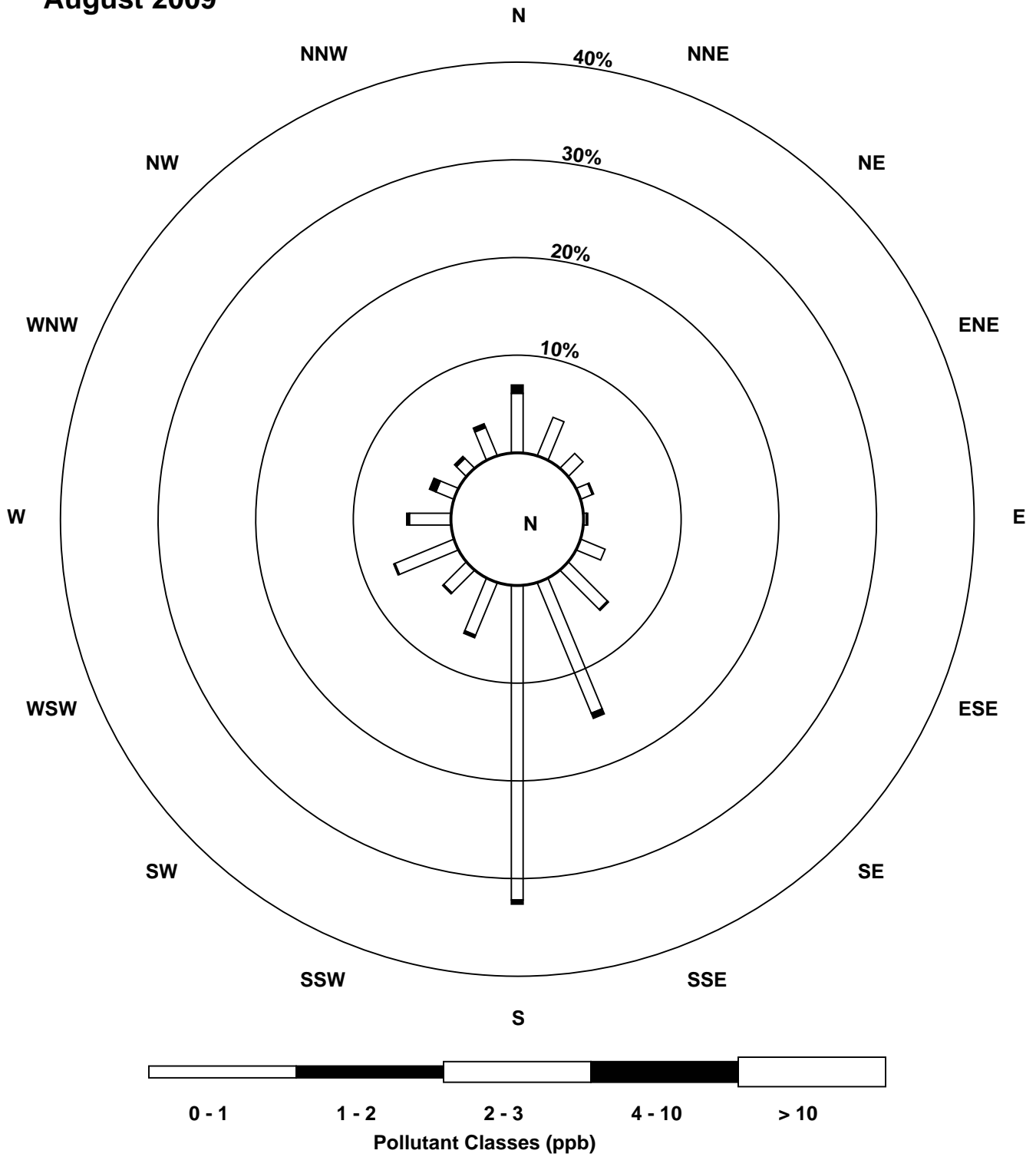
Maximum Value: 2.4 ppb on Aug 14 20:00	Maximum Daily Average: 0.8 ppb on Aug 18	Hours in Service: 744
Minimum Value: 0 ppb on Aug 25 05:00	Minimum Daily Average: 0.6 ppb on Aug 7	Hours of Data: 705
Maximum Diurnal Average: 0.8 ppb at hour 20	Minimum Diurnal Average: 0.6 ppb at hour 5	Hours of Missing Data: 39
Monthly Average: 0.67 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 0.8 P <sub>99</sub> = 1.1	Hours of Calibration: 34
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9												
2-Aug	1	1	1	1	0	1	0	P	P	P	P	P	0	1	0	0	1	1	1	1	1	1	1	1	1	0.6	0.9												
3-Aug	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3												
4-Aug	1	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0.6	0.7												
5-Aug	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9												
6-Aug	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	0.6	0.8												
7-Aug	1	0	1	1	0	0	1	0	1	0	1	1	1	1	1	1	0	A	1	1	1	1	1	0	1	0.6	0.7												
8-Aug	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	0.8												
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9												
10-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9												
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8												
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4												
13-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9												
14-Aug	1	1	1	0	0	0	0	1	1	0	A	1	1	1	1	1	1	1	1	1	2	1	1	1	0	0.7	2.4												
15-Aug	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9												
16-Aug	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8												
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0												
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0												
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1												
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9												
21-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0.7	0.9												
22-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9												
23-Aug	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8												
24-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9												
25-Aug	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0.6	1.0												
26-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.2												
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0												
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	0	1	1	1	1	1	1	0.6	0.9												
29-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1												
30-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.8	2.2												
31-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1												
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	Diurnal Average													
	1.0	0.9	0.8	0.8	0.9	0.9	1.1	0.9	1.1	1.1	0.9	0.9	0.9	0.9	1.0	0.9	0.8	0.9	1.3	2.4	1.4	0.9	1.0	1.0	Diurnal Maximum														
C - Calibration																								P - Power Failure				A - Automated Daily Zero Span											

# Hourly Maximums for TRS at Portable-Kinuso August 2009



# Pollutant Rose for TRS at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

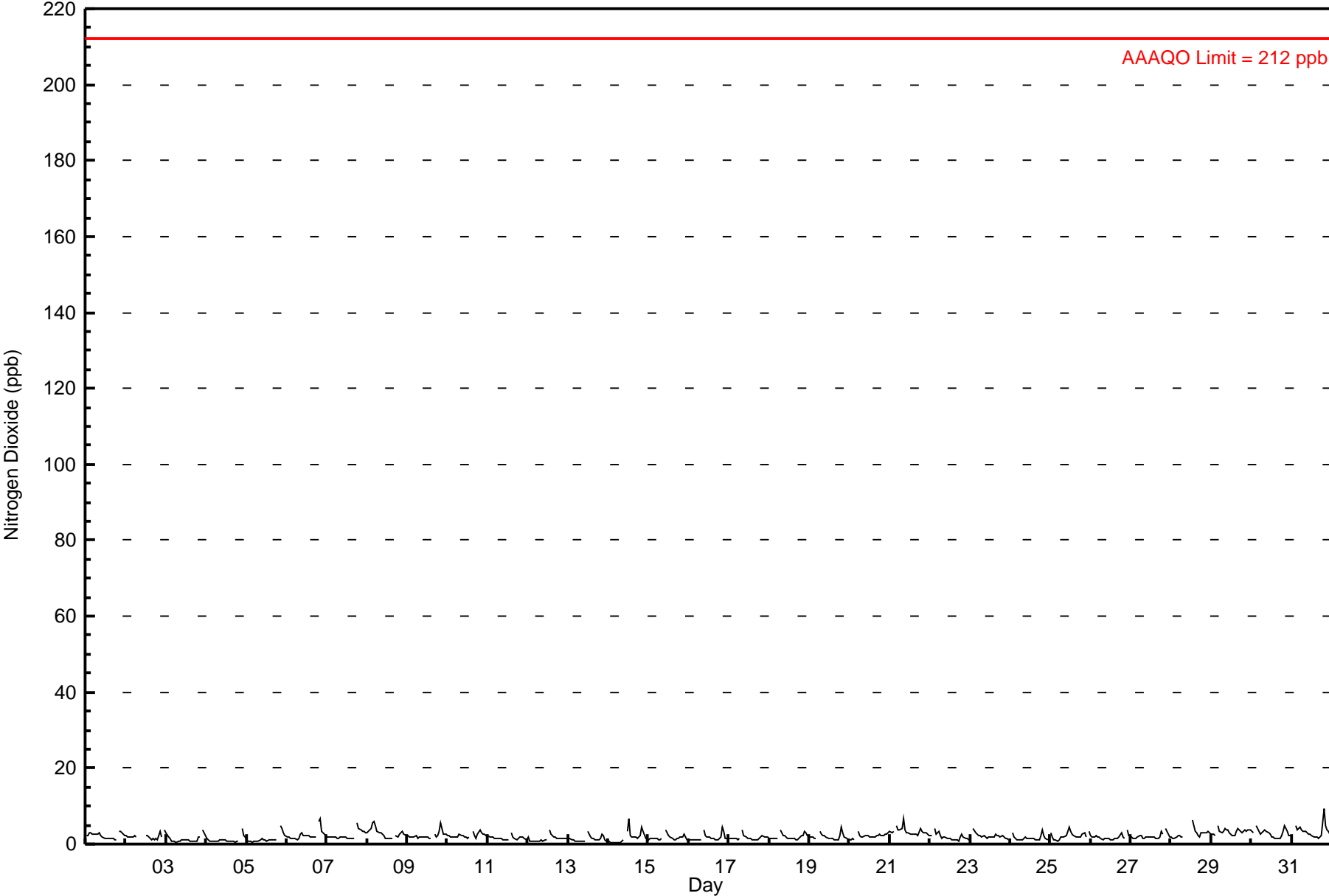
**Portable-Kinuso - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9.4 ppb on Aug 31 20:00	Maximum Daily Average: 3.3 ppb on Aug 21	Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 36 Percent Operational Time: 99.3
Minimum Value: 0 ppb on Aug 14 07:00 Maximum Diurnal Average: 3.2 ppb at hour 21 Monthly Average: 2.06 ppb	Minimum Daily Average: 1.1 ppb on Aug 4 Minimum Diurnal Average: 1.6 ppb at hour 18 Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.3 Median = 1.8 Q <sub>3</sub> = 2.5 P <sub>90</sub> = 3.4 P <sub>99</sub> = 5.9	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	2	3	3	3	3	3	2	3	2	2	1	1	1	2	1	1	1	1	A	3	3	3	2	2.2	3.5
2-Aug	2	2	2	2	2	2	2	P	P	P	P	2	2	2	2	1	1	1	1	1	3	2	A	4	2.0	3.7
3-Aug	3	2	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	4	2	1.3	3.6
4-Aug	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	4	2	2	1.1	3.9
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	5	4	3	2	1.4	4.9
6-Aug	2	2	2	1	1	1	1	1	3	3	2	2	2	2	2	2	2	2	A	6	7	3	3	2	2.4	6.8
7-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	6	4	4	3	3	3	2.3	5.6
8-Aug	3	3	4	6	6	5	3	3	3	3	2	2	1	1	1	1	A	2	2	2	3	3	3	2	2.8	6.0
9-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	A	3	2	2	3	5	3	2	3	2.2	5.4
10-Aug	2	2	2	2	2	2	2	3	2	2	2	2	2	2	A	3	2	2	2	4	3	3	3	2	2.2	3.6
11-Aug	2	2	2	2	2	2	2	1	1	1	1	1	1	A	3	2	1	1	1	2	2	2	2	1	1.6	3.1
12-Aug	2	1	1	1	1	1	1	1	1	1	1	1	A	4	2	2	2	1	1	2	2	1	2	1	1.4	3.8
13-Aug	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	1	1	1	1	1	3	2	1	1	1.3	3.2
14-Aug	1	0	0	0	0	0	0	1	1	1	A	3	7	2	2	2	2	1	2	2	4	3	2	1	1.7	6.6
15-Aug	1	1	1	2	2	2	1	1	2	A	4	3	2	2	2	1	1	1	1	2	2	3	2	1	1.7	3.8
16-Aug	1	1	1	1	1	1	1	1	A	4	2	2	2	2	1	1	1	1	1	2	5	3	1	1	1.7	4.6
17-Aug	1	2	2	1	1	1	1	A	4	2	2	2	2	1	1	1	1	1	1	2	2	2	2	2	1.6	3.7
18-Aug	2	2	2	1	1	1	A	4	2	2	2	2	2	1	2	2	1	1	2	2	2	3	3	2	1.9	3.7
19-Aug	2	2	2	2	1	A	3	3	2	2	2	2	2	2	1	1	1	1	2	4	3	2	1	1	1.9	4.4
20-Aug	1	1	1	1	A	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2.1	3.4
21-Aug	3	3	3	A	5	4	4	4	7	4	3	3	3	3	3	3	3	2	4	4	3	3	3	2	3.3	6.6
22-Aug	2	2	A	4	3	3	2	2	2	2	2	1	1	1	1	1	1	2	3	2	1	1	1	1	1.8	4.0
23-Aug	1	A	4	3	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	1	1	2.1	4.1
24-Aug	A	3	2	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	4	2	2	1	A	1.6	3.8
25-Aug	3	2	1	1	1	1	2	2	2	2	3	5	3	3	2	2	2	2	2	3	3	2	A	3	2.2	4.6
26-Aug	2	2	2	2	2	2	1	1	1	1	2	1	1	1	1	1	1	2	3	2	2	A	4	2	1.8	3.6
27-Aug	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	A	4	2	2	2.0	4.0
28-Aug	2	2	1	2	2	2	2	2	C	C	C	C	C	6	4	3	2	2	3	3	3	3	3	3	2.6	6.5
29-Aug	3	3	2	A	5	3	3	3	4	4	4	3	2	2	2	3	4	3	3	3	4	4	4	4	3.3	4.7
30-Aug	3	3	A	5	3	3	3	3	4	3	3	3	2	2	2	1	1	2	2	3	5	3	2	2	2.8	4.9
31-Aug	2	A	5	4	4	4	4	4	3	3	3	3	2	2	2	2	2	2	2	9	5	4	3	2	3.3	9.4
	2.0	1.8	1.9	1.9	2.0	2.0	1.8	1.9	2.2	2.1	2.0	2.0	2.0	1.9	1.7	1.7	1.6	1.6	2.1	2.9	3.2	2.8	2.4	2.1	Diurnal Average	
	3.3	3.2	4.9	5.8	6.0	4.8	3.8	4.1	6.6	3.8	3.9	4.6	6.6	6.5	3.5	3.3	4.0	3.5	5.6	9.4	6.8	4.1	3.6	3.7	Diurnal Maximum	

C - Calibration      P - Power Failure      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb      24-hr 106 ppb

# Hourly Averages for NO<sub>2</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

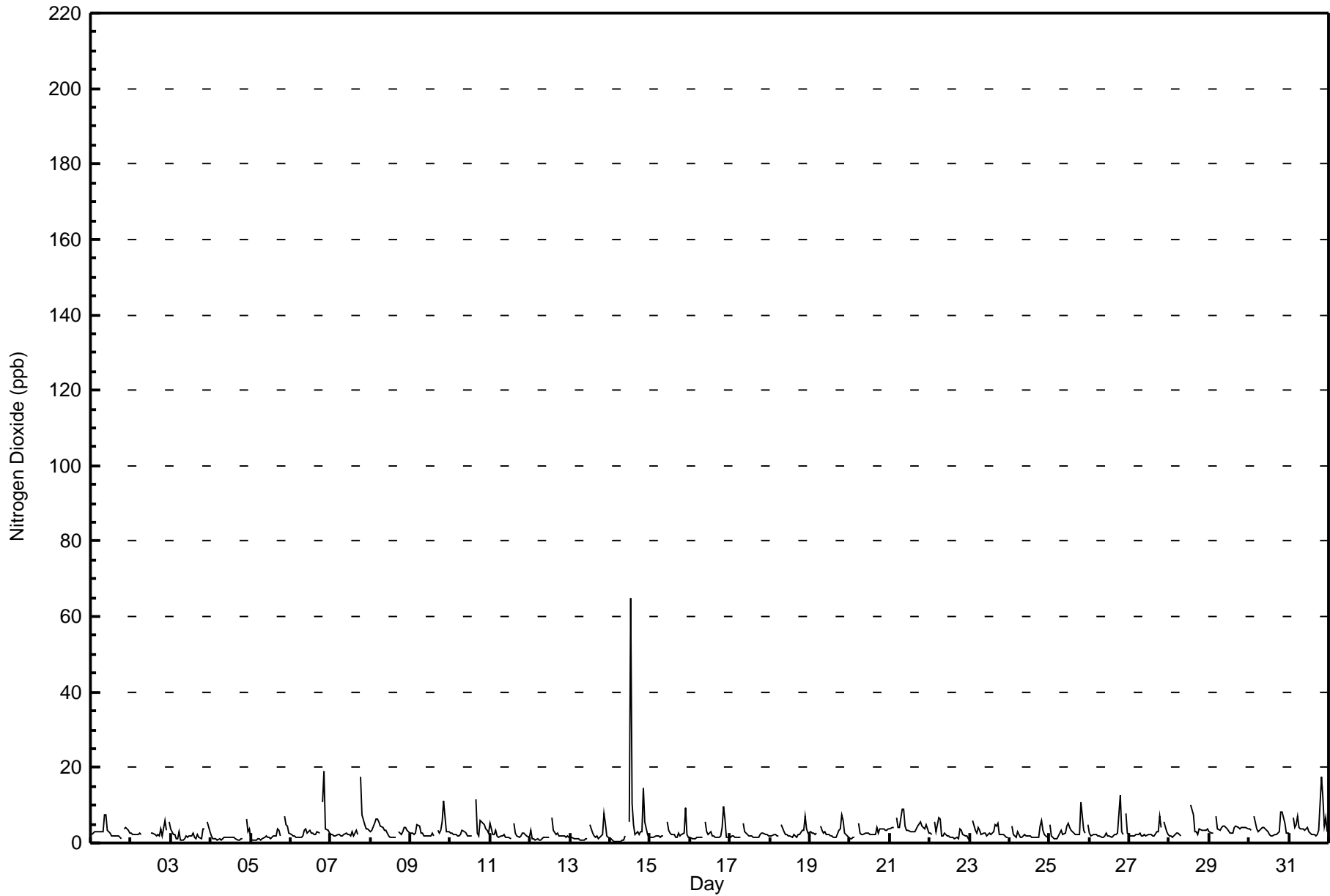
**Portable-Kinuso - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 64.9 ppb on Aug 14 13:00	Maximum Daily Average: 5.7 ppb on Aug 14	Hours in Service: 744
Minimum Value: 0 ppb on Aug 14 07:00	Minimum Daily Average: 1.6 ppb on Aug 4	Hours of Data: 703
Maximum Diurnal Average: 5.7 ppb at hour 21	Minimum Diurnal Average: 2.2 ppb at hour 2	Hours of Missing Data: 41
Monthly Average: 2.98 ppb	Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 1.8 Median = 2.3 Q <sub>3</sub> = 3.4 P <sub>90</sub> = 5.0 P <sub>99</sub> = 11.5	Hours of Calibration: 36
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	3	3	3	3	3	3	3	7	8	3	2	2	2	2	2	1	1	A	4	4	4	3	3.0	7.6	
2-Aug	2	2	2	2	2	3	2	P	P	P	P	3	3	2	2	2	2	2	4	2	6	4	A	5	2.8	6.0
3-Aug	4	2	2	1	1	3	1	1	1	2	1	2	2	3	2	1	2	2	1	4	4	A	6	3	2.1	5.7
4-Aug	2	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	A	6	3	4	1.6	6.4
5-Aug	1	1	1	1	1	1	1	1	2	2	2	1	1	2	2	2	4	3	2	A	7	5	4	3	2.1	7.2
6-Aug	2	2	2	2	2	2	1	2	3	4	3	3	3	3	2	2	3	3	A	11	19	4	3	3	3.6	19.1
7-Aug	2	2	2	2	2	2	2	2	2	3	2	2	2	3	2	3	2	A	17	7	5	4	4	3	3.4	17.4
8-Aug	3	4	5	6	6	6	4	4	3	3	3	2	2	2	2	2	A	3	2	3	4	4	3	3	3.4	6.4
9-Aug	3	3	2	3	5	4	3	3	2	2	2	2	3	2	A	3	3	3	3	6	11	3	3	3	3.3	11.2
10-Aug	3	3	2	2	2	2	2	3	3	3	2	2	2	2	A	12	2	2	6	5	5	4	3	3	3.3	11.6
11-Aug	5	2	2	3	2	2	2	2	1	2	1	1	A	5	3	2	2	2	3	3	2	2	2	2	2.3	5.2
12-Aug	3	1	1	1	1	1	1	1	1	1	1	1	A	7	4	2	3	2	2	2	2	2	2	2	1.9	6.8
13-Aug	2	2	1	1	1	1	1	1	1	1	1	A	5	3	2	2	2	1	2	2	8	5	2	1	2.1	7.8
14-Aug	1	1	1	1	0	1	0	1	1	2	A	5	65	10	5	2	3	2	3	3	14	6	2	1	5.7	64.9
15-Aug	1	1	2	2	2	2	2	2	2	A	6	3	3	2	2	2	1	2	2	2	3	9	2	1	2.4	9.2
16-Aug	1	1	1	1	1	1	1	1	A	6	3	2	3	2	2	2	1	2	2	4	10	6	2	2	2.5	9.9
17-Aug	2	2	2	2	2	1	2	A	5	3	2	2	2	2	1	1	2	2	2	3	3	2	2	2	2.1	5.2
18-Aug	2	2	2	2	2	2	A	5	3	2	2	2	2	2	2	2	2	2	2	3	3	7	4	3	2.6	7.1
19-Aug	3	3	3	2	3	A	4	3	3	3	2	2	2	2	2	1	2	4	4	7	6	2	2	1	2.8	7.5
20-Aug	1	1	1	1	A	5	2	2	2	3	3	3	2	2	2	2	4	3	4	4	4	3	4	4	2.7	5.1
21-Aug	4	4	4	A	7	4	4	9	9	5	3	3	3	3	3	3	4	5	5	4	4	4	5	3	4.4	9.0
22-Aug	3	2	A	6	3	7	6	2	2	3	2	2	2	2	1	1	2	1	4	3	2	2	2	1	2.6	6.7
23-Aug	1	A	6	3	3	4	3	2	2	2	2	3	2	3	5	4	5	2	2	2	2	2	2	1	2.9	5.9
24-Aug	A	4	2	2	1	3	1	1	2	2	2	2	2	2	2	2	1	1	4	6	3	2	2	A	2.3	5.8
25-Aug	5	2	2	1	1	2	3	3	2	3	4	5	4	3	3	2	2	2	2	11	4	3	A	5	3.2	10.9
26-Aug	3	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	13	3	2	A	8	3	2.8	12.6
27-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	7	4	A	6	3	2	2.7	7.2
28-Aug	2	2	2	2	3	3	2	2	C	C	C	C	C	10	7	3	3	2	4	3	3	3	4	4	3.4	10.1
29-Aug	3	3	3	A	7	4	3	4	5	4	4	4	3	3	2	4	4	4	4	4	4	4	4	4	3.8	7.2
30-Aug	4	3	A	7	4	3	3	4	4	4	3	3	2	2	2	2	3	3	8	8	8	5	3	2	3.7	8.3
31-Aug	3	A	7	4	5	7	4	4	4	3	4	4	3	2	2	2	2	2	3	17	12	5	7	3	4.7	17.5
	2.5	2.2	2.3	2.4	2.6	2.7	2.4	2.5	2.8	2.8	2.5	2.5	4.4	2.9	2.4	2.4	2.5	2.4	3.8	4.8	5.7	4.1	3.2	2.6	Diurnal Average	
	5.2	4.5	6.8	7.0	7.2	7.0	6.4	9.0	8.9	7.6	5.7	5.5	64.9	10.5	7.3	11.6	4.5	5.2	17.4	17.5	19.1	9.2	7.9	5.4	Diurnal Maximum	

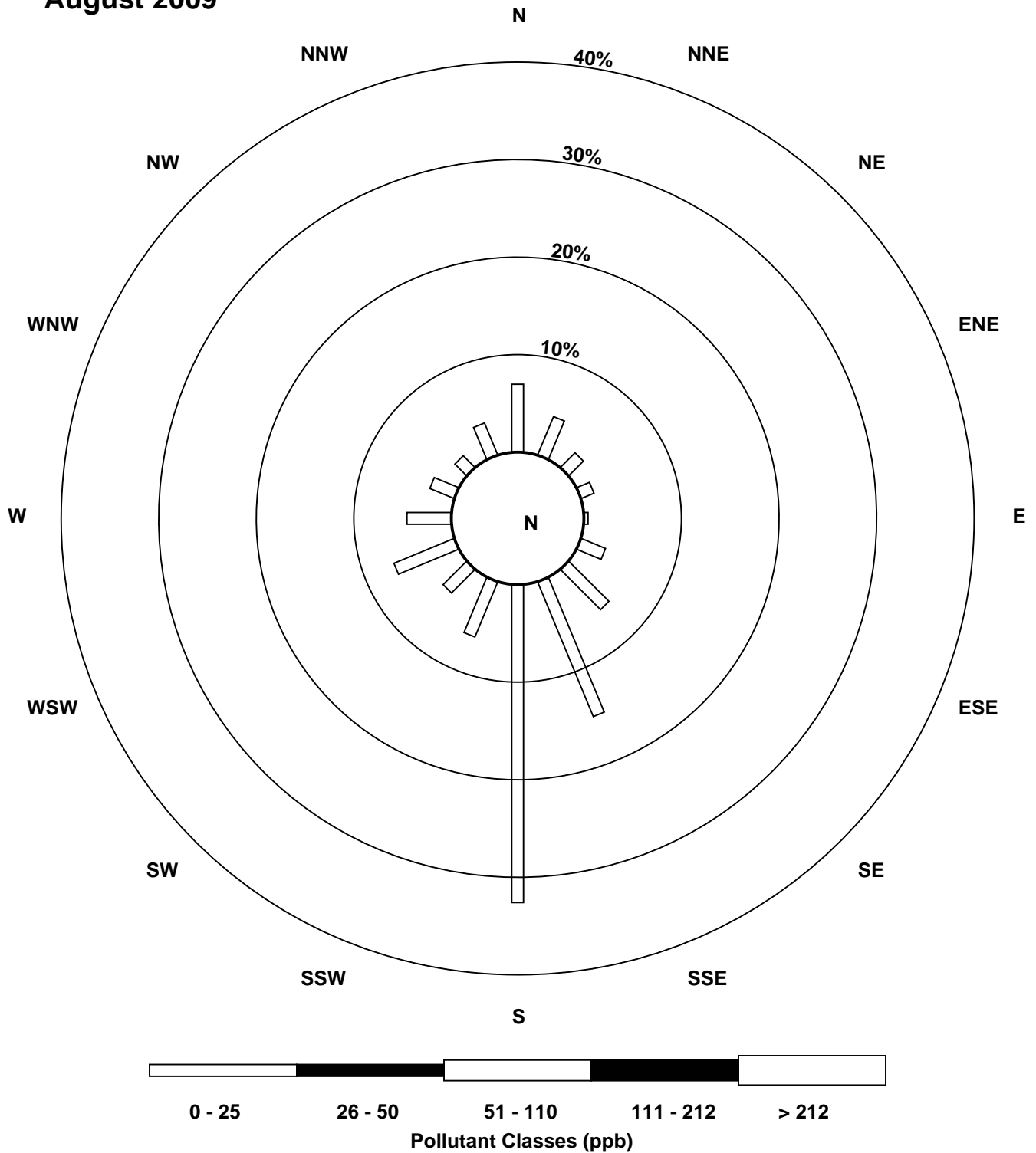
C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span

# Hourly Maximums for NO<sub>2</sub> at Portable-Kinuso August 2009





# Pollutant Rose for NO<sub>2</sub> at Portable-Kinuso August 2009

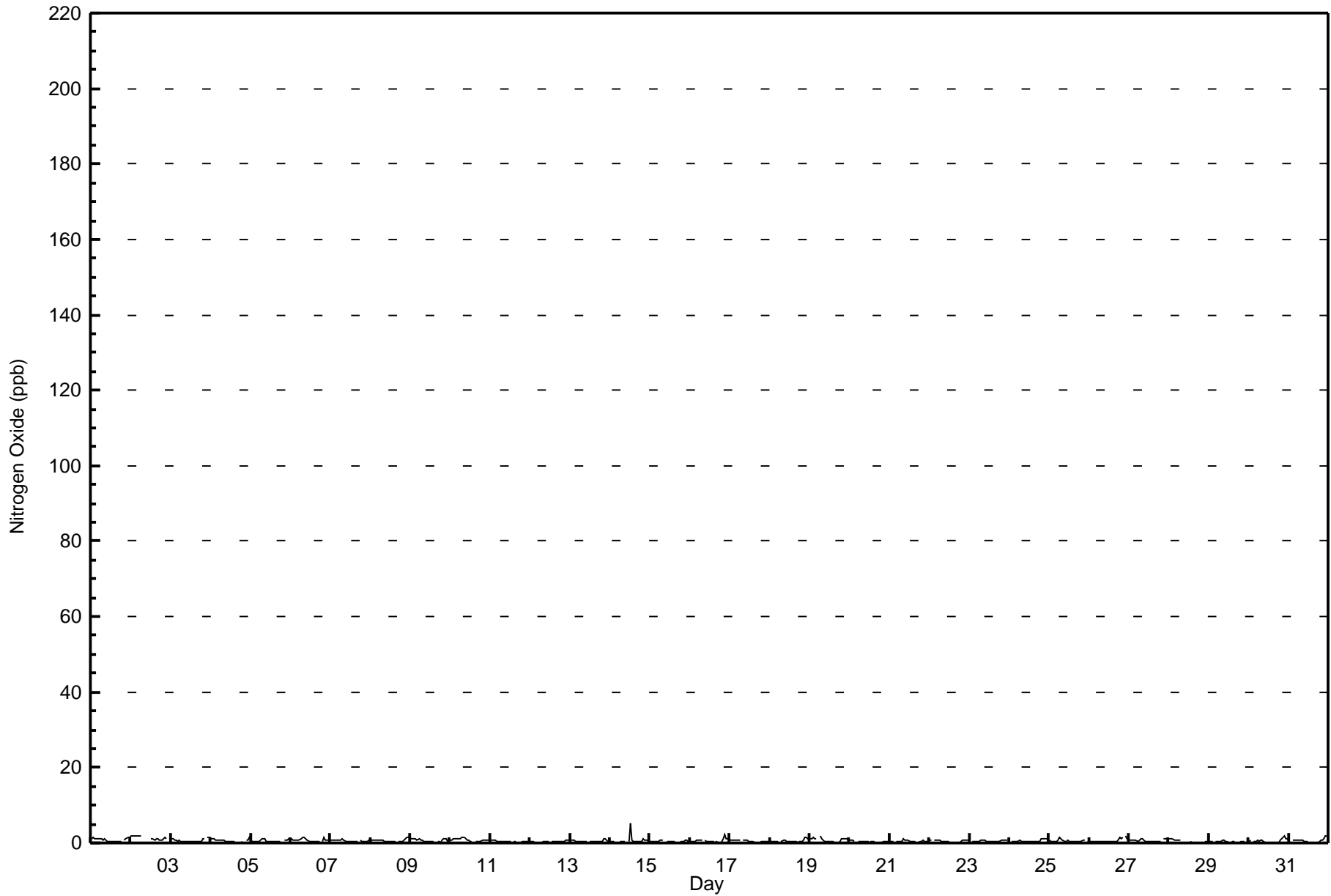


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Kinuso - Nitrogen Oxide (NO) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 5.1 ppb on Aug 14 13:00		Maximum Daily Average: 1.3 ppb on Aug 2		Hours in Service: 744																																												
Minimum Value: 0 ppb on Aug 22 17:00		Minimum Daily Average: 0.3 ppb on Aug 29		Hours of Data: 703																																												
Maximum Diurnal Average: 0.9 ppb at hour 23		Minimum Diurnal Average: 0.2 ppb at hour 18		Hours of Missing Data: 41																																												
Monthly Average: 0.56 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.5 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.1 P <sub>99</sub> = 1.8		Hours of Calibration: 36																																												
Percent Operational Time: 99.3																																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	A	1	1	1	2	0.8	1.7																							
2-Aug	2	2	2	2	2	2	2	P	P	P	P	P	1	1	1	1	1	1	1	1	1	A	1	1.3	1.8																							
3-Aug	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	2	0.6	1.6																							
4-Aug	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.6	1.4																							
5-Aug	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	1	1	0.5	1.0																							
6-Aug	1	1	1	1	1	1	1	1	2	1	1	1	1	0	0	0	0	0	A	1	2	1	1	0.8	1.7																							
7-Aug	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	1	0	1	1	0.6	0.9																							
8-Aug	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0.5	1.5																							
9-Aug	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0.7	1.3																							
10-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	1	1	1	1	0.8	1.4																							
11-Aug	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0.4	0.8																							
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7																							
13-Aug	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0.5	1.1																							
14-Aug	0	0	0	0	0	0	0	1	0	0	A	0	5	1	0	0	0	0	0	0	1	1	1	0.6	5.1																							
15-Aug	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9																							
16-Aug	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	1	2	1	0.6	2.3																							
17-Aug	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9																							
18-Aug	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	2	0.5	1.6																							
19-Aug	1	1	1	1	1	A	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.8	1.9																							
20-Aug	1	1	1	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8																							
21-Aug	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0.5	1.2																							
22-Aug	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.8																							
23-Aug	1	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.7																							
24-Aug	A	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0.5	1.3																							
25-Aug	1	1	1	0	0	1	2	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	A	0.6	1.6																							
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	2	1	0.6	1.7																							
27-Aug	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	A	1	1	0.6	1.2																							
28-Aug	1	1	1	1	1	1	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.4	1.0																							
29-Aug	0	0	0	A	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7																							
30-Aug	0	1	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0.5	1.8																							
31-Aug	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.6	1.8																							
																								0.8	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.5	0.8	0.9	0.9	0.8	Diurnal Average
																								1.7	1.8	1.8	1.7	1.7	1.8	1.9	1.5	1.7	1.1	0.8	0.7	5.1	1.0	0.8	1.0	1.2	0.8	1.5	1.3	1.6	2.3	1.8	1.8	Diurnal Maximum
C - Calibration																								P - Power Failure						A - Automated Daily Zero Span																		

# Hourly Averages for NO at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Kinuso - Nitrogen Oxide (NO) - ppb  
August 1, 2009 to September 1, 2009**

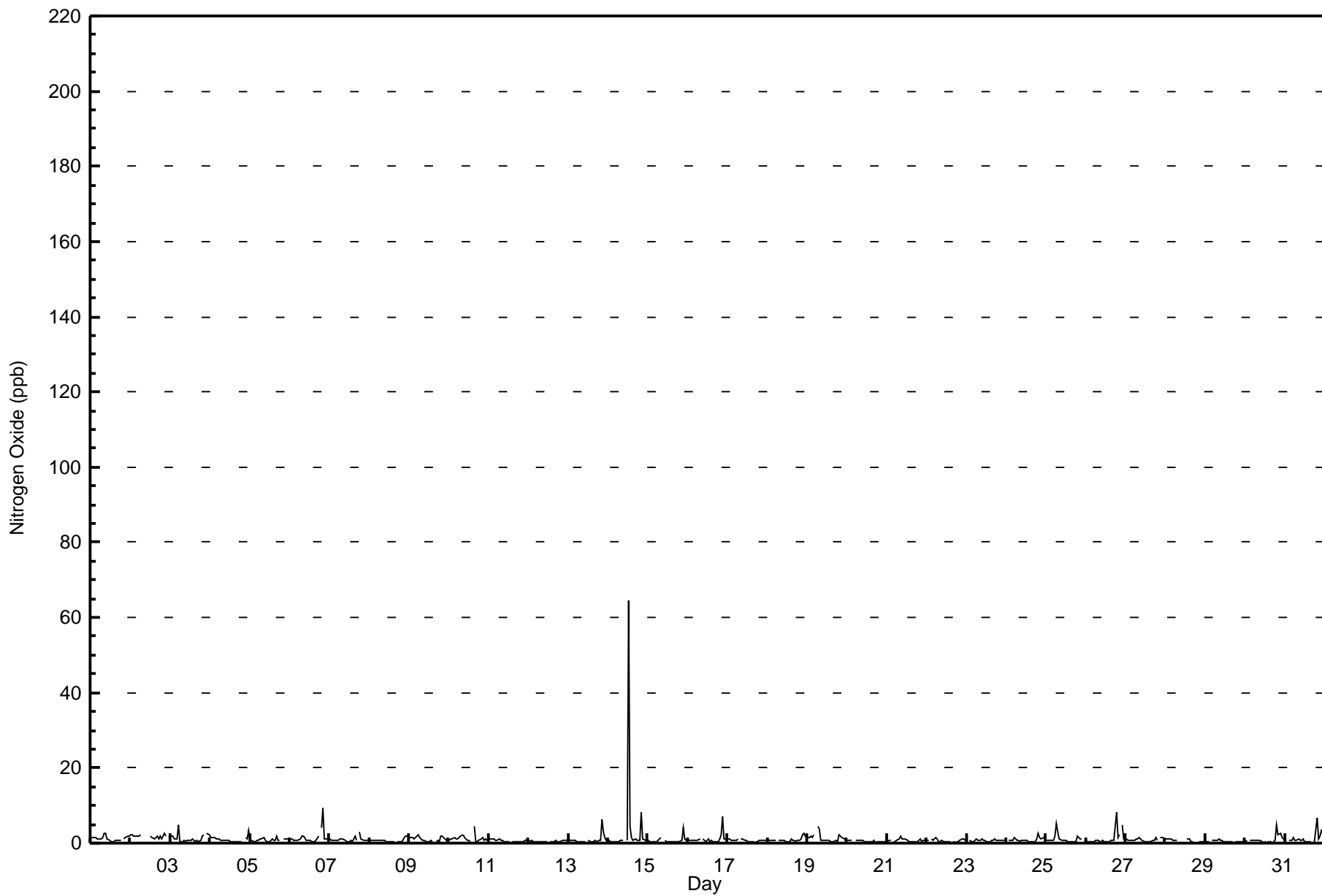
Maximum Value: 64.6 ppb on Aug 14 13:00	Maximum Daily Average: 4.0 ppb on Aug 14	Hours in Service: 744
Minimum Value: 0 ppb on Aug 28 19:00	Minimum Daily Average: 0.5 ppb on Aug 29	Hours of Data: 703
Maximum Diurnal Average: 2.8 ppb at hour 13	Minimum Diurnal Average: 0.5 ppb at hour 18	Hours of Missing Data: 41
Monthly Average: 1.04 ppb	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.5 Median = 0.7 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 1.7 P <sub>99</sub> = 5.9	Hours of Calibration: 36
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	1	2	1	1	1	1	1	2	3	1	1	0	0	0	1	1	1	1	A	1	1	2	2	1.2	2.7	
2-Aug	2	2	2	2	2	2	2	P	P	P	P	P	2	1	1	1	2	1	2	1	3	2	A	2	1.8	2.7	
3-Aug	2	2	1	1	1	5	0	0	1	1	1	1	1	1	1	0	1	0	1	2	2	A	2	1.2	4.7		
4-Aug	2	2	2	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	A	2	1	3	0.9	3.3	
5-Aug	1	1	1	0	1	1	1	1	2	1	1	0	0	1	1	1	2	1	1	A	1	1	1	1	0.9	1.8	
6-Aug	1	1	1	1	1	1	1	2	2	2	1	1	1	1	0	1	1	2	A	4	9	1	1	1	1.5	9.4	
7-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	2	1	A	3	1	1	1	1	1	0.9	3.0	
8-Aug	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	1	2	2	2	0.7	1.8	
9-Aug	2	1	2	1	2	2	1	1	1	1	0	0	0	1	0	A	0	1	0	2	2	1	1	1	1.0	2.3	
10-Aug	1	1	1	1	1	1	1	2	2	2	1	1	1	1	0	A	4	0	0	1	1	2	1	1	1.2	4.3	
11-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	1	1	1	1	1	0.7	1.2	
12-Aug	1	1	1	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	0.5	0.9	
13-Aug	1	1	1	1	1	1	0	0	0	0	0	A	1	0	0	1	1	0	1	1	6	3	1	1	1.0	6.2	
14-Aug	1	0	0	0	0	0	1	1	1	1	A	1	65	4	2	1	1	1	1	1	8	1	1	1	4.0	64.6	
15-Aug	1	0	0	0	0	1	1	1	1	A	1	1	0	0	0	0	0	0	0	1	1	4	1	1	0.7	3.9	
16-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0	0	0	1	2	7	1	1	1.1	7.1	
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0.7	1.0	
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	0	1	1	1	2	3	2	0.9	2.7	
19-Aug	1	1	2	2	2	A	5	4	1	1	1	1	1	1	0	0	0	1	0	2	2	1	1	1	1.4	4.5	
20-Aug	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0.5	0.9	
21-Aug	0	1	1	A	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	1	1	0	1	1	0.7	1.7	
22-Aug	1	1	A	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.7	1.5	
23-Aug	1	A	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
24-Aug	A	1	1	1	1	2	1	1	0	1	1	1	1	1	1	1	1	1	1	3	2	1	1	A	0.9	2.6	
25-Aug	1	1	1	1	1	2	5	3	1	1	1	1	1	0	0	0	0	0	0	2	1	1	A	1	1.0	5.3	
26-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	8	2	2	A	5	1	1.2	8.2	
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	0.9	1.4	
28-Aug	1	1	1	1	1	1	1	1	C	C	C	C	C	1	1	0	0	0	0	0	0	0	0	0	0.6	1.3	
29-Aug	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0	
30-Aug	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	5	2	3	2	1	0.9	4.7
31-Aug	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	7	1	2	3	2	1.2	6.7	

1.0	0.9	0.9	0.9	0.8	1.1	1.2	1.1	1.0	0.9	0.7	0.6	2.8	0.7	0.6	0.6	0.6	0.5	0.9	1.4	1.9	1.5	1.3	1.1	Diurnal Average	
2.1	2.2	2.0	1.9	2.3	4.7	5.3	3.9	2.5	2.7	1.1	1.2	64.6	4.4	1.6	4.3	1.8	1.8	8.2	6.7	9.4	7.1	4.8	3.3	Diurnal Maximum	

C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span

# Hourly Maximums for NO at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

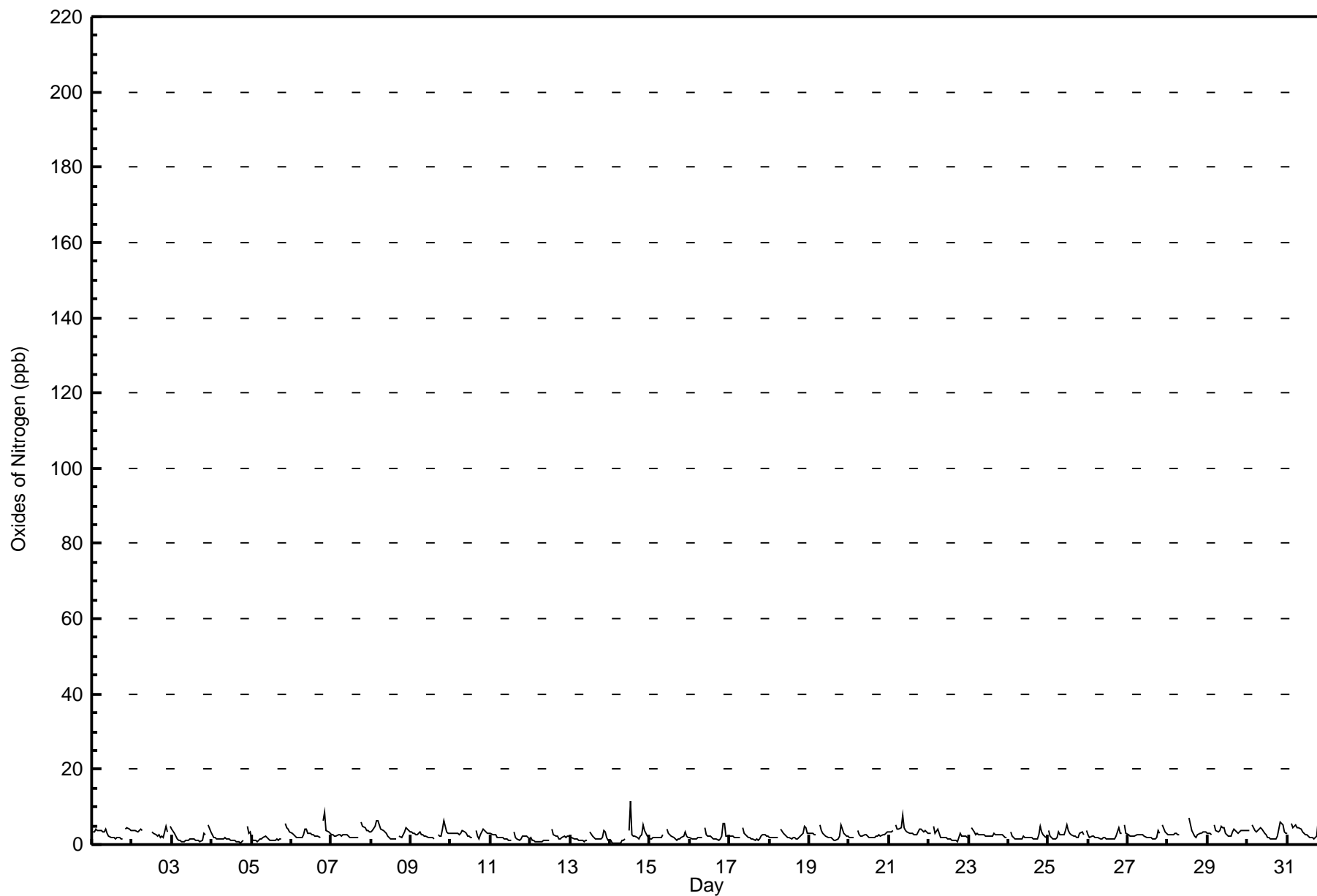
**Portable-Kinuso - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 11.5 ppb on Aug 14 13:00	Maximum Daily Average: 3.9 ppb on Aug 31	Hours in Service: 744
Minimum Value: 0 ppb on Aug 14 03:00	Minimum Daily Average: 1.6 ppb on Aug 4	Hours of Data: 703
Maximum Diurnal Average: 3.9 ppb at hour 21	Minimum Diurnal Average: 1.7 ppb at hour 18	Hours of Missing Data: 41
Monthly Average: 2.56 ppb	Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 1.7 Median = 2.3 Q <sub>3</sub> = 3.2 P <sub>90</sub> = 4.1 P <sub>99</sub> = 6.5	Hours of Calibration: 36
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	3	3	4	4	4	4	3	3	4	3	2	2	2	2	2	2	2	2	1	A	4	5	4	4	2.9	4.7	
2-Aug	4	4	4	4	4	4	4	P	P	P	P	P	3	3	2	2	3	2	2	2	3	5	3	A	5	3.2	4.9
3-Aug	4	3	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	3	3	A	5	3	1.8	5.2
4-Aug	3	2	2	2	1	1	1	1	2	1	1	1	1	1	1	1	1	0	1	1	A	5	3	3	3	1.6	4.7
5-Aug	2	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	2	A	6	5	4	3	3	1.9	5.7
6-Aug	3	3	2	2	2	2	2	3	4	4	3	3	3	3	2	2	2	2	A	6	8	4	3	3	3	3.1	8.4
7-Aug	3	3	2	2	2	3	2	2	3	3	2	2	2	2	2	2	2	A	6	5	4	4	4	4	4	2.8	6.1
8-Aug	3	4	5	6	7	5	4	4	3	3	2	2	2	2	1	1	A	2	2	3	3	4	4	3	3	3.3	6.5
9-Aug	3	3	3	3	3	3	2	3	2	2	2	2	2	2	2	A	3	2	2	4	6	3	3	3	3	2.8	6.5
10-Aug	3	3	3	3	3	3	3	4	3	3	2	2	2	2	A	4	2	2	3	4	4	3	3	3	3	2.9	4.2
11-Aug	3	3	3	3	2	2	2	2	1	1	1	1	1	A	3	2	2	1	1	2	2	2	2	2	2	1.9	3.2
12-Aug	2	1	1	1	1	1	1	1	1	1	1	1	A	4	3	2	2	2	2	2	2	2	2	2	2	1.6	3.9
13-Aug	2	2	2	1	1	1	1	1	1	1	1	A	4	2	2	2	2	1	2	2	4	3	2	1	1	1.8	3.7
14-Aug	1	1	0	0	0	0	0	1	1	2	A	4	12	3	2	2	2	2	2	3	5	4	2	2	2	2.2	11.5
15-Aug	2	2	2	2	2	2	2	2	2	A	4	3	2	2	2	1	1	1	2	2	2	3	2	2	2	2.0	4.1
16-Aug	2	2	2	2	2	2	2	2	A	4	3	2	2	2	2	2	1	1	1	2	6	5	2	2	2	2.3	5.7
17-Aug	2	2	2	2	2	2	2	A	5	3	2	2	2	2	1	1	1	1	1	2	3	2	2	2	2	2.1	4.5
18-Aug	2	2	2	2	2	2	A	4	3	3	2	2	2	2	2	2	1	1	2	3	3	5	5	3	3	2.4	4.8
19-Aug	3	3	3	3	2	A	5	4	3	3	2	2	2	2	2	1	1	1	2	5	4	3	2	2	2	2.7	5.4
20-Aug	2	2	2	2	A	4	3	2	2	3	3	2	2	2	2	2	2	2	3	2	3	3	3	3	3	2.4	3.8
21-Aug	4	3	4	A	5	4	4	5	8	4	4	4	3	3	3	3	3	2	4	4	4	3	4	3	3	3.8	7.8
22-Aug	3	3	A	5	3	4	3	2	2	2	2	2	1	1	1	1	1	1	2	3	2	2	2	2	2	2.2	4.8
23-Aug	2	A	4	3	3	3	3	2	3	2	2	2	2	2	2	3	3	3	2	3	3	2	2	2	2	2.5	4.5
24-Aug	A	3	2	2	2	2	2	1	2	2	2	2	2	2	2	2	1	1	3	5	3	3	2	A	2	2.1	5.0
25-Aug	4	2	2	1	1	2	3	3	3	3	4	5	4	3	3	2	2	2	2	3	3	2	A	4	4	2.7	5.3
26-Aug	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	5	3	3	A	5	3	3	2.3	5.2
27-Aug	2	2	2	2	2	3	3	2	3	3	2	2	2	2	2	2	2	2	4	3	A	5	4	3	3	2.5	5.1
28-Aug	3	3	2	3	3	3	3	2	C	C	C	C	C	7	4	3	2	2	3	3	3	3	3	3	3	3.1	6.9
29-Aug	3	3	3	A	5	4	4	4	5	4	4	3	2	2	2	3	4	3	3	3	4	4	4	4	4	3.5	5.3
30-Aug	4	4	A	5	4	3	4	4	4	4	3	3	2	2	2	2	1	2	2	4	6	5	3	3	3	3.3	6.0
31-Aug	3	A	6	4	5	5	4	4	4	3	3	3	2	2	2	2	2	2	2	10	6	5	5	4	4	3.9	10.2
	2.7	2.5	2.5	2.5	2.6	2.6	2.5	2.5	2.8	2.6	2.4	2.3	2.4	2.2	1.9	1.9	1.8	1.7	2.3	3.4	3.9	3.6	3.2	2.9		Diurnal Average	
	4.1	3.7	5.6	6.3	6.5	5.3	5.2	4.6	7.8	4.4	4.4	5.3	11.5	6.9	3.6	3.6	4.1	3.4	6.1	10.2	8.4	5.4	5.3	4.8		Diurnal Maximum	

C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span

# Hourly Averages for NO<sub>x</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

**Portable-Kinuso - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
August 1, 2009 to September 1, 2009**

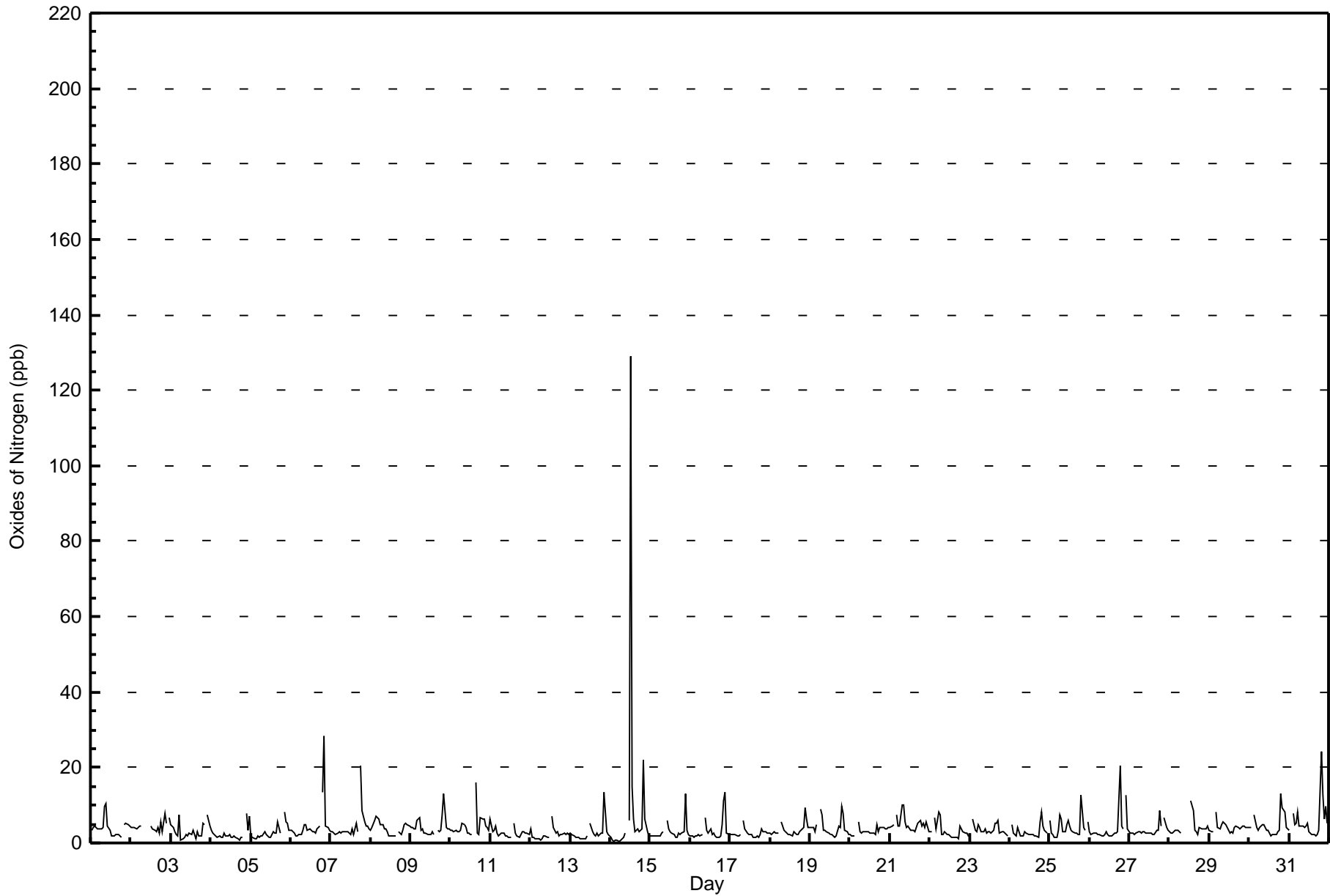
Maximum Value: 129.0 ppb on Aug 14 13:00	Maximum Daily Average: 9.4 ppb on Aug 14	Hours in Service: 744
Minimum Value: 0 ppb on Aug 14 06:00	Minimum Daily Average: 2.3 ppb on Aug 12	Hours of Data: 703
Maximum Diurnal Average: 7.3 ppb at hour 21	Minimum Diurnal Average: 2.7 ppb at hour 18	Hours of Missing Data: 41
Monthly Average: 3.84 ppb	Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.2 Median = 2.9 Q <sub>3</sub> = 4.2 P <sub>90</sub> = 6.1 P <sub>99</sub> = 13.5	Hours of Calibration: 36
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	4	4	4	4	4	4	4	10	10	4	3	2	2	2	2	2	2	2	A	5	5	5	4	4.0	10.3
2-Aug	4	4	4	4	4	4	5	P	P	P	P	P	5	4	3	3	4	3	6	3	8	5	A	7	4.4	7.8
3-Aug	5	4	3	2	2	7	1	1	1	2	2	3	2	3	2	1	3	2	2	5	5	A	8	4	3.1	7.6
4-Aug	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	A	8	4	7	2.4	7.8
5-Aug	2	1	1	1	2	1	2	2	3	2	2	2	2	3	3	3	5	4	2	A	8	6	5	3	2.9	8.3
6-Aug	3	3	2	2	2	2	2	3	5	5	3	4	3	3	3	3	4	4	A	13	28	4	4	4	4.8	28.4
7-Aug	3	3	3	2	3	3	3	3	3	3	3	3	2	4	2	5	3	A	20	9	5	4	4	4	4.2	20.4
8-Aug	3	4	6	7	7	6	5	5	4	4	3	2	2	2	2	2	A	3	2	3	5	5	5	4	3.9	6.9
9-Aug	4	4	4	4	6	7	4	4	3	3	2	2	3	2	2	A	3	3	4	8	13	4	4	4	4.1	13.0
10-Aug	3	4	3	3	3	3	3	5	5	4	3	3	2	2	A	16	3	2	7	6	6	4	4	3	4.3	15.9
11-Aug	6	3	3	4	3	2	3	3	3	2	2	2	2	A	5	3	2	2	2	3	3	3	3	2	2.7	6.4
12-Aug	4	2	1	1	1	1	1	1	1	2	2	1	A	7	4	3	3	2	2	2	3	2	3	2	2.3	7.1
13-Aug	3	2	2	2	1	1	1	1	1	1	2	A	5	3	2	2	3	2	3	3	13	8	3	2	2.9	13.2
14-Aug	1	1	0	1	1	0	1	1	1	3	A	6	129	15	6	3	4	3	3	4	22	6	3	2	9.4	129.0
15-Aug	2	2	2	2	2	2	2	3	3	A	6	4	3	3	2	2	1	3	2	3	3	13	3	2	3.0	13.2
16-Aug	2	2	2	2	2	2	2	2	A	7	3	3	4	2	3	2	2	2	2	5	11	13	3	2	3.4	13.3
17-Aug	2	2	2	2	2	2	2	A	6	4	3	2	2	2	2	1	2	2	2	4	3	3	3	3	2.6	6.1
18-Aug	2	2	3	3	3	3	A	5	4	3	3	2	2	2	3	3	2	2	3	4	4	9	6	4	3.4	9.3
19-Aug	4	4	4	3	5	A	9	7	3	3	3	3	2	2	2	2	2	4	4	10	8	4	3	2	4.1	9.8
20-Aug	2	2	2	2	A	6	3	2	3	3	3	3	2	3	2	2	5	3	4	4	4	4	4	4	3.2	5.6
21-Aug	4	5	5	A	7	5	5	10	10	6	4	4	3	3	3	3	4	5	6	5	5	4	5	3	5.0	10.1
22-Aug	3	3	A	7	4	8	8	2	2	3	2	2	2	2	2	1	2	1	4	4	3	3	3	2	3.1	8.2
23-Aug	2	A	6	3	3	5	4	3	3	4	3	3	3	3	3	5	5	6	3	3	3	2	2	2	3.5	6.4
24-Aug	A	5	2	2	2	4	2	2	2	3	2	2	2	2	2	2	2	2	5	8	5	3	3	A	3.0	8.1
25-Aug	6	3	2	2	2	4	7	6	3	3	5	6	4	3	3	3	3	2	2	13	4	3	A	6	4.1	12.8
26-Aug	3	2	3	3	2	2	2	2	2	2	3	2	2	2	2	3	3	3	21	4	4	A	13	4	3.8	20.6
27-Aug	3	2	3	2	3	3	3	3	3	3	2	2	2	3	2	2	4	3	8	4	A	7	4	3	3.3	8.5
28-Aug	3	3	3	3	3	3	3	3	C	C	C	C	C	11	9	3	3	2	4	4	4	4	4	4	4.0	11.3
29-Aug	4	3	3	A	8	4	4	4	5	6	5	5	4	3	3	4	5	4	4	4	4	5	4	4	4.2	8.1
30-Aug	4	4	A	8	4	4	4	4	5	5	5	4	3	2	2	2	2	3	4	13	9	8	4	4	4.5	13.0
31-Aug	4	A	8	5	5	8	5	4	5	4	4	5	3	2	2	2	2	2	3	24	13	6	10	5	5.8	24.4
	3.3	2.9	3.1	3.0	3.2	3.6	3.3	3.4	3.6	3.6	3.0	3.0	7.0	3.4	2.8	2.9	2.9	2.7	4.6	6.1	7.3	5.4	4.4	3.6	Diurnal Average	
	6.4	5.0	7.7	7.6	8.1	8.4	9.0	10.1	10.0	10.3	6.1	6.1	129.0	14.9	8.5	15.9	5.4	6.1	20.6	24.4	28.4	13.3	12.8	7.0	Diurnal Maximum	

C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span



# Hourly Maximums for NO<sub>x</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

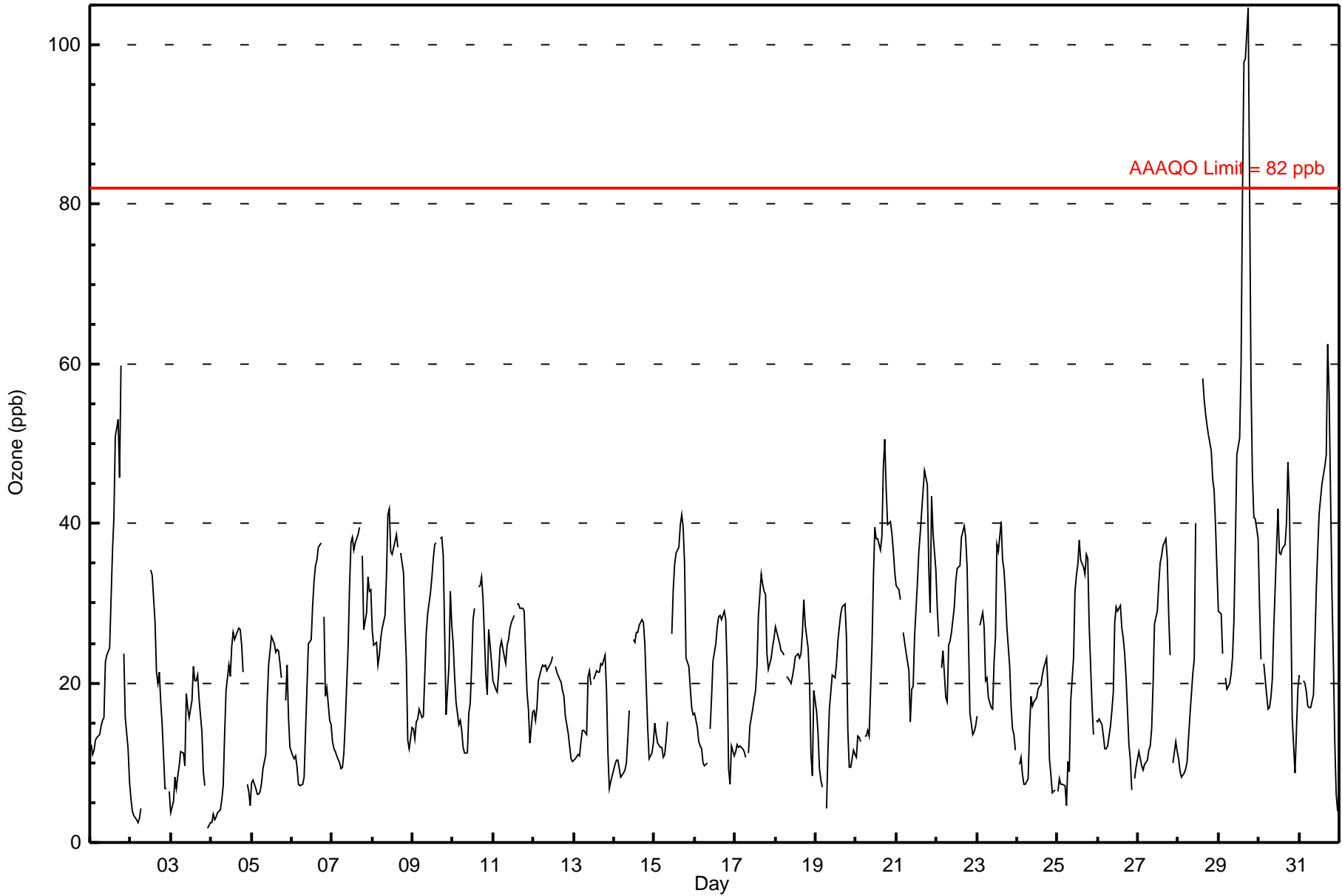
**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 3 24-hr: 0	Hours in Service: 744
Maximum Value: 104.7 ppb on Aug 29 18:00	Maximum Daily Average: 47.8 ppb on Aug 29
Minimum Value: 2 ppb on Aug 3 23:00	Hours of Data: 705
Maximum Diurnal Average: 36.2 ppb at hour 18	Hours of Missing Data: 39
Monthly Average: 22.58 ppb	Hours of Calibration: 34
Minimum Daily Average: 12.1 ppb on Aug 3	Percent Operational Time: 99.3
Minimum Diurnal Average: 13.3 ppb at hour 4	
Percentiles: P <sub>1</sub> = 3.1 P <sub>10</sub> = 8.8 Q <sub>1</sub> = 12.7 Median = 21.0 Q <sub>3</sub> = 29.3 P <sub>90</sub> = 38.1 P <sub>99</sub> = 58.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	12	11	12	13	13	14	15	15	16	23	24	24	30	36	41	51	53	46	60	A	24	16	12	8	24.6	59.8																						
2-Aug	5	4	3	3	2	3	4	P	P	P	P	P	34	33	28	21	20	21	18	15	7	7	A	6	13.1	34.2																						
3-Aug	4	5	8	7	8	10	11	11	10	19	17	16	18	22	20	20	21	18	14	9	7	A	2	2	12.1	22.1																						
4-Aug	3	4	3	3	4	4	5	7	13	19	22	21	25	26	25	26	27	27	25	21	A	7	6	5	14.3	26.8																						
5-Aug	7	8	7	6	6	6	7	9	11	18	22	24	26	25	24	24	24	23	21	A	18	22	16	12	15.9	25.9																						
6-Aug	11	11	11	9	7	7	7	8	14	19	25	25	30	33	35	35	37	38	A	28	18	19	15	15	19.9	37.6																						
7-Aug	13	12	11	11	10	9	9	11	15	25	32	37	38	37	37	39	40	A	36	27	29	33	32	32	25.0	39.6																						
8-Aug	27	25	25	22	23	26	27	28	33	41	42	36	36	38	39	37	A	36	34	28	23	13	12	14	28.9	41.8																						
9-Aug	14	13	15	15	17	16	16	21	26	29	31	33	36	37	38	A	38	38	36	26	16	22	31	27	25.8	38.3																						
10-Aug	25	21	18	15	15	14	12	11	11	16	17	22	28	29	A	32	32	33	31	21	18	27	25	23	21.6	33.3																						
11-Aug	20	19	19	21	24	25	23	22	25	25	27	28	28	A	30	30	29	29	29	24	19	17	12	16	23.6	29.9																						
12-Aug	16	15	17	20	22	22	22	22	21	22	23	23	A	22	21	20	20	19	18	16	14	12	11	10	18.7	23.3																						
13-Aug	10	11	11	11	13	14	14	13	21	21	20	A	20	21	21	21	22	22	23	19	11	7	8	8	15.9	23.4																						
14-Aug	10	10	10	9	8	9	9	10	13	17	A	25	25	26	26	27	28	28	25	20	14	10	11	12	16.7	27.9																						
15-Aug	15	14	12	12	12	11	11	13	15	A	26	32	35	36	37	40	41	39	35	23	22	19	17	16	23.2	41.1																						
16-Aug	16	14	13	12	12	10	10	10	A	14	18	23	25	27	28	28	28	29	28	21	9	7	12	11	17.7	29.1																						
17-Aug	11	12	12	12	12	11	11	A	11	15	17	18	19	22	28	34	32	31	31	24	22	23	25	26	20.0	33.6																						
18-Aug	27	26	25	24	24	23	A	21	20	20	21	22	23	24	23	24	26	30	27	24	20	11	8	19	22.4	30.4																						
19-Aug	16	14	9	8	7	A	4	12	17	19	21	21	22	25	27	29	29	30	26	14	9	10	12	11	17.0	29.8																						
20-Aug	11	13	13	13	A	13	13	14	13	25	33	40	38	38	37	38	47	51	44	40	40	39	37	34	29.7	50.6																						
21-Aug	32	32	30	A	26	25	24	22	15	19	20	26	33	36	39	42	44	47	45	34	29	43	39	34	32.0	46.6																						
22-Aug	29	26	A	22	24	18	18	25	25	26	29	33	34	35	35	38	40	38	35	25	16	14	14	15	26.7	39.7																						
23-Aug	16	A	27	29	27	20	21	18	17	17	23	26	37	37	40	35	34	31	27	22	17	14	13	12	24.4	40.2																						
24-Aug	A	10	11	9	7	7	8	14	18	17	18	18	19	20	21	22	23	19	11	9	6	7	A	14.2	23.2																							
25-Aug	6	8	7	7	7	5	10	9	18	23	32	33	35	38	35	35	34	36	36	27	17	13	A	15	21.2	37.9																						
26-Aug	15	16	15	13	12	12	12	15	17	19	28	30	29	30	27	26	24	21	12	10	7	A	8	10	17.6	29.7																						
27-Aug	11	11	10	9	10	10	12	12	14	20	27	29	32	35	36	37	38	36	29	23	A	10	13	11	20.7	38.1																						
28-Aug	10	9	8	9	9	10	13	16	21	23	40	C	C	C	58	55	54	52	51	49	45	44	40	34	31.1	58.3																						
29-Aug	29	29	24	A	21	19	20	21	23	28	38	49	51	60	82	98	98	105	82	58	46	41	41	38	47.8	104.7																						
30-Aug	30	23	A	22	19	17	17	18	20	27	37	42	36	36	37	37	40	48	43	30	16	9	14	19	27.7	47.7																						
31-Aug	21	A	20	20	19	17	17	17	18	25	32	37	41	45	46	47	48	63	56	31	23	13	6	4	29.0	62.5																						
																								15.8	14.6	14.0	13.3	14.0	13.6	13.4	15.4	17.7	21.7	26.2	28.3	30.5	32.1	34.0	35.0	35.7	36.2	33.2	24.9	19.5	18.2	17.1	16.6	Diurnal Average
																								32.3	31.6	30.4	28.9	27.1	25.6	26.9	28.4	33.4	41.1	41.8	48.6	50.8	60.0	81.6	97.9	98.3	104.7	81.9	57.5	45.9	44.1	40.6	38.1	Diurnal Maximum

C - Calibration      P - Power Failure      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na

# Hourly Averages for O<sub>3</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Hourly Maximums**

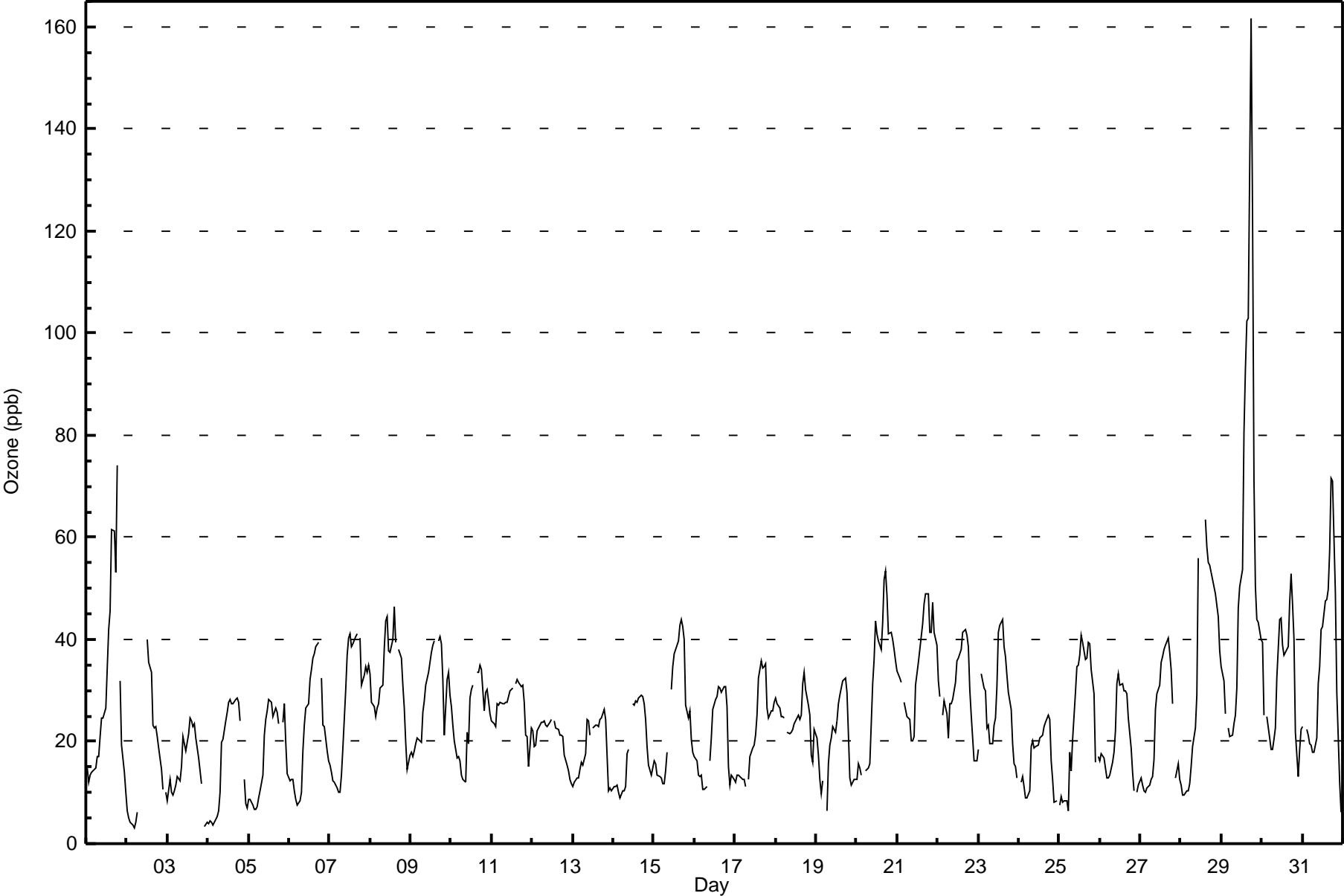
**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 161.6 ppb on Aug 29 18:00	Maximum Daily Average: 56.5 ppb on Aug 29	Hours in Service: 744
Minimum Value: 3 ppb on Aug 2 05:00	Minimum Daily Average: 15.2 ppb on Aug 3	Hours of Data: 705
Maximum Diurnal Average: 40.9 ppb at hour 18	Minimum Diurnal Average: 15.1 ppb at hour 4	Hours of Missing Data: 39
Monthly Average: 25.59 ppb	Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 10.6 Q <sub>1</sub> = 15.2 Median = 23.8 Q <sub>3</sub> = 32.2 P <sub>90</sub> = 41.2 P <sub>99</sub> = 70.5	Hours of Calibration: 34
		Percent Operational Time: 99.3

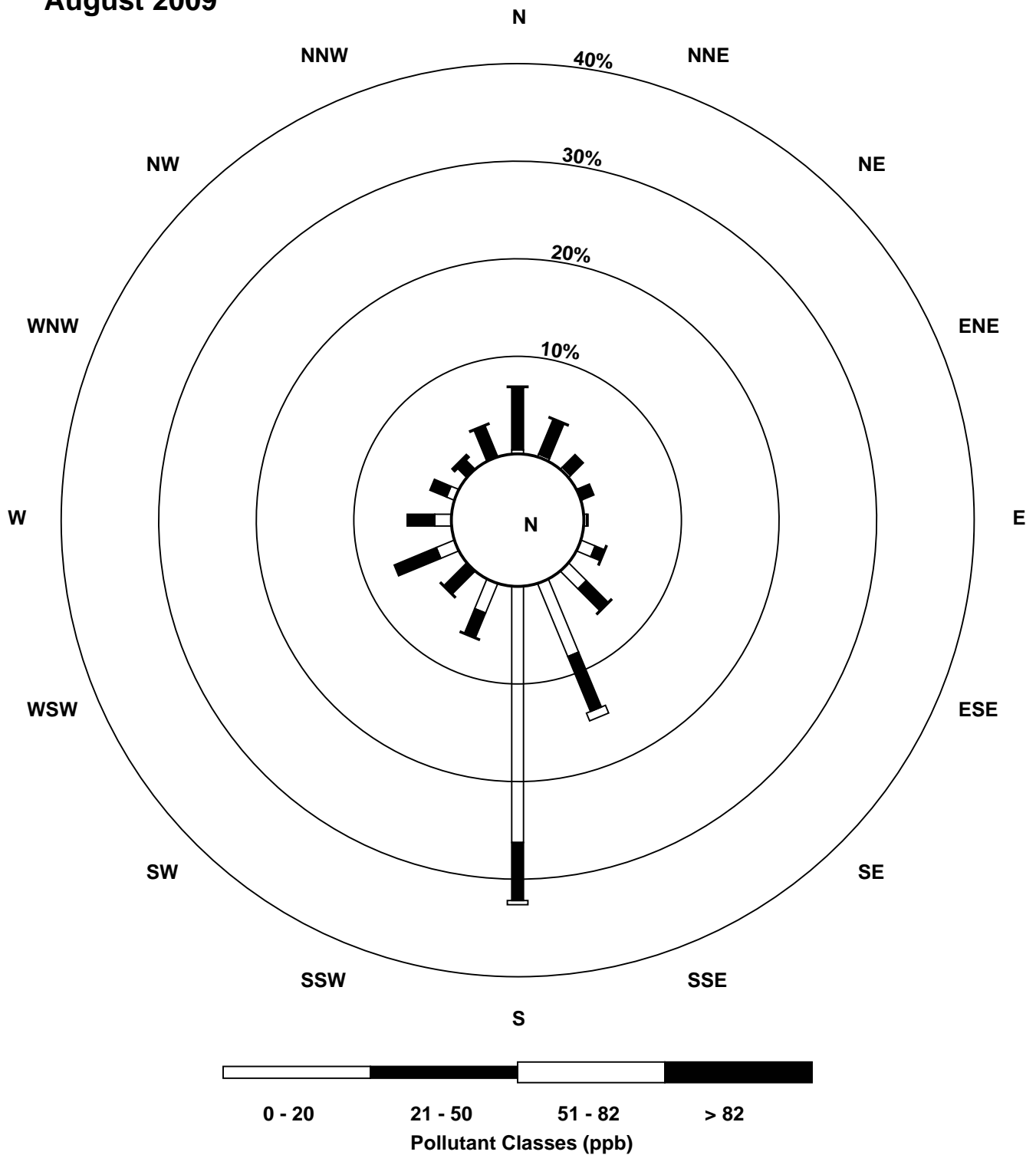
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	15	12	13	14	14	15	17	17	21	25	25	27	34	42	46	62	61	53	74	A	32	19	14	10	28.8	74.1																							
2-Aug	6	5	4	4	3	4	6	P	P	P	P	P	40	35	33	23	23	23	21	19	15	11	A	10	15.9	39.9																							
3-Aug	8	13	10	10	10	12	13	12	15	21	19	18	21	25	24	23	23	21	17	14	12	A	3	4	15.2	24.7																							
4-Aug	4	5	4	4	4	5	6	10	20	20	24	26	28	28	27	27	28	28	28	24	A	13	8	7	16.5	28.4																							
5-Aug	9	9	8	7	7	7	9	10	13	21	24	26	28	28	25	26	27	26	24	A	24	27	20	14	18.1	28.2																							
6-Aug	12	13	13	10	9	8	8	10	18	23	27	27	32	34	36	37	39	40	A	33	23	23	18	16	22.1	39.5																							
7-Aug	15	14	12	12	11	10	10	13	19	30	37	40	41	39	39	40	41	A	40	31	33	35	34	35	27.5	41.2																							
8-Aug	33	28	27	25	27	28	31	31	38	44	44	38	38	40	46	39	A	38	36	31	27	20	15	17	32.2	46.4																							
9-Aug	18	17	18	19	21	20	20	26	28	31	34	36	37	39	40	A	40	41	39	32	21	32	34	29	29.2	40.6																							
10-Aug	27	23	20	17	17	16	13	12	12	22	20	28	30	31	A	34	34	35	34	26	30	30	28	26	24.6	34.9																							
11-Aug	24	24	23	27	27	28	27	27	28	28	29	30	30	A	31	32	32	31	31	28	21	21	15	23	26.8	32.2																							
12-Aug	22	19	19	22	23	24	24	24	23	23	24	24	A	24	23	22	21	21	21	17	15	14	13	12	20.7	24.4																							
13-Aug	11	12	13	13	15	16	15	18	24	24	21	A	23	23	23	23	24	25	26	24	17	10	11	10	18.4	26.3																							
14-Aug	11	11	12	10	9	10	10	11	18	18	A	27	27	28	28	29	29	29	28	24	19	15	13	15	18.8	29.2																							
15-Aug	16	16	13	13	13	12	12	14	18	A	30	35	37	38	40	43	44	43	40	27	25	26	20	18	25.8	44.0																							
16-Aug	17	16	13	13	13	11	11	11	A	16	21	26	28	29	31	30	30	31	31	27	15	12	14	13	19.9	30.8																							
17-Aug	12	14	14	13	13	12	11	A	13	17	19	19	21	25	33	36	34	35	35	27	25	26	26	28	22.0	35.9																							
18-Aug	29	27	27	25	25	25	A	22	22	22	22	23	24	25	24	25	31	34	30	27	25	17	16	22	24.8	33.6																							
19-Aug	21	17	13	10	12	A	6	16	19	21	23	22	24	28	29	30	32	32	30	22	13	11	13	12	19.8	32.4																							
20-Aug	13	16	15	14	A	14	15	15	16	31	36	44	41	40	38	43	52	53	49	41	41	40	38	36	32.2	53.4																							
21-Aug	34	32	32	A	28	26	25	24	20	21	31	35	38	40	43	47	49	49	41	41	47	41	39	35.0	49.1																								
22-Aug	32	29	A	25	28	25	21	27	27	28	31	36	37	38	41	42	41	39	30	25	16	16	16	29.9	41.8																								
23-Aug	19	A	33	30	30	23	23	20	20	23	25	31	41	43	44	39	37	33	30	26	20	16	15	13	27.5	44.0																							
24-Aug	A	12	13	11	9	9	10	19	20	19	19	19	21	21	21	23	24	25	24	16	13	8	8	A	16.6	25.1																							
25-Aug	7	9	8	8	8	6	18	14	20	30	35	35	37	41	39	36	36	39	39	34	29	16	A	17	24.5	40.8																							
26-Aug	16	18	17	15	13	13	13	16	18	22	31	33	31	31	30	30	29	25	19	14	10	A	10	11	20.2	33.4																							
27-Aug	13	11	10	10	11	12	13	13	17	26	29	31	35	37	38	39	40	37	34	28	A	13	16	13	22.9	40.2																							
28-Aug	11	9	9	10	10	12	15	19	23	29	56	C	C	C	64	58	55	55	53	50	49	47	44	38	34.1	63.6																							
29-Aug	35	32	26	A	23	21	21	23	25	30	46	50	54	81	93	102	103	162	123	71	50	44	43	40	56.5	161.6																							
30-Aug	39	25	A	25	21	18	18	20	23	32	44	44	39	37	37	39	47	53	47	40	22	13	18	22	31.6	52.9																							
31-Aug	23	A	22	21	20	19	18	18	21	31	35	42	43	48	48	50	57	72	71	49	30	21	12	6	33.7	71.7																							
																								18.4	16.8	15.9	15.1	15.7	15.4	15.4	17.7	20.6	25.1	29.3	31.1	33.1	34.9	37.0	37.5	38.7	40.9	38.7	30.1	24.9	22.2	19.9	19.1	Diurnal Average	
																								39.5	32.4	33.4	30.4	29.8	27.6	30.5	31.1	38.4	43.7	55.9	50.4	53.6	80.6	92.9	102.4	102.8	161.6	123.3	71.3	50.2	47.2	44.4	40.1	Diurnal Maximum	

C - Calibration                      P - Power Failure                      A - Automated Daily Zero Span

# Hourly Maximums for O<sub>3</sub> at Portable-Kinuso August 2009



# Pollutant Rose for O<sub>3</sub> at Portable-Kinuso August 2009



**Peace Airshed Zone Association  
Summary of Eight Hour Running Averages**

**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
August 1, 2009 to September 1, 2009**

Maximum Value: 79.1 ppb on Aug 29 20:00																								Hours in Service:	744
Minimum Value: 2.9 ppb on Aug 4 05:00																								Hours of Data:	730
Percentiles: P <sub>1</sub> = 4.1 P <sub>10</sub> = 10.6 Q <sub>1</sub> = 14.3 Median = 21.6 Q <sub>3</sub> = 27.8 P <sub>90</sub> = 35.6 P <sub>99</sub> = 57.5																								Hours of Missing Data:	14
																								Hours of Calibration:	6
																								Percent Operational Time:	98.9
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	24	20	16	13	13	13	13	13	13	15	16	18	20	23	26	31	35	38	43	45	44	41	37	31	45.3
2-Aug	24	18	10	9	7	5	4	4	3	N	N	N	N	N	N	N	N	26	25	24	20	17	16	13	26.3
3-Aug	11	9	7	6	6	7	7	8	9	10	12	13	14	15	17	18	19	19	19	18	16	16	13	10	19.1
4-Aug	8	6	4	3	3	3	3	4	5	7	10	12	15	17	20	22	24	25	25	25	25	23	20	17	25.4
5-Aug	14	11	9	7	7	6	7	7	8	9	11	13	16	18	20	22	23	24	24	24	23	22	21	19	24.0
6-Aug	17	16	14	14	12	10	9	9	9	10	12	14	17	20	24	27	30	32	33	34	32	30	27	24	33.6
7-Aug	21	17	16	14	13	12	11	11	11	13	15	19	22	26	29	33	36	37	38	36	35	34	34	33	37.7
8-Aug	31	30	29	28	27	26	26	25	26	28	30	32	34	35	37	38	38	38	37	35	33	30	26	23	38.4
9-Aug	22	19	16	15	14	15	15	16	17	19	21	24	26	29	31	33	35	36	37	36	33	31	30	29	36.6
10-Aug	28	26	23	22	22	21	18	16	15	14	14	15	17	18	19	22	25	28	30	29	28	28	27	26	29.6
11-Aug	25	23	21	22	22	22	22	22	22	23	24	25	26	26	27	28	28	29	29	29	27	26	24	22	29.1
12-Aug	20	19	17	17	17	18	19	20	20	21	22	22	22	22	22	22	22	21	21	20	19	18	16	15	22.3
13-Aug	14	13	12	11	11	11	12	12	13	15	16	17	18	19	20	21	21	21	22	21	20	18	17	15	21.8
14-Aug	14	12	10	9	9	9	9	9	10	11	11	13	15	18	20	23	25	27	26	26	24	22	20	19	26.5
15-Aug	17	15	14	13	12	12	12	12	12	12	14	17	20	24	28	32	35	36	37	36	34	32	30	27	36.9
16-Aug	23	20	18	16	15	14	13	12	11	11	12	14	16	18	21	23	24	26	27	27	25	22	20	18	27.0
17-Aug	16	14	12	11	11	12	12	12	12	12	13	13	15	16	19	20	23	25	27	28	28	28	28	27	28.2
18-Aug	26	25	25	25	25	25	25	24	23	22	22	22	21	22	22	22	23	24	25	25	25	23	21	21	26.1
19-Aug	20	18	15	13	12	12	11	10	10	11	12	14	16	18	20	23	24	26	26	25	24	22	20	18	26.1
20-Aug	15	13	12	11	12	12	12	13	13	15	18	22	24	27	30	33	37	40	42	42	42	42	42	41	42.0
21-Aug	40	37	35	35	33	31	29	27	25	23	22	22	23	24	26	29	32	36	39	40	39	40	40	39	40.3
22-Aug	38	35	34	32	31	27	24	23	23	23	25	26	28	30	32	34	35	36	35	33	30	27	25	25	37.6
23-Aug	22	19	18	19	20	21	22	23	23	22	21	21	22	24	27	29	31	33	33	33	30	28	24	21	33.5
24-Aug	20	16	14	12	11	10	9	9	11	11	12	14	15	17	18	19	19	20	20	19	18	16	15	14	20.3
25-Aug	12	9	8	7	7	7	7	7	9	11	14	17	21	25	28	31	33	35	35	34	32	29	28	26	35.2
26-Aug	23	20	17	15	14	14	14	14	14	14	16	18	20	22	24	26	26	27	25	22	19	18	15	13	26.6
27-Aug	11	10	9	9	10	10	10	11	11	12	14	17	20	23	26	29	32	34	34	33	33	30	27	23	34.0
28-Aug	19	15	12	10	10	10	10	11	12	14	18	19	21	N	N	N	N	N	N	53	52	51	49	46	53.3
29-Aug	43	40	37	35	31	28	25	23	22	24	27	31	36	44	54	63	72	78	79	78	76	71	63	63	79.1
30-Aug	55	45	39	34	30	27	24	21	19	20	22	25	27	29	32	34	37	39	40	38	36	32	30	27	54.9
31-Aug	25	22	18	17	17	19	19	19	18	19	21	23	26	29	33	37	40	45	48	47	45	41	36	31	48.0
54.9 44.7 39.4 35.0 32.9 30.9 29.1 27.3 26.2 28.3 30.4 32.1 33.7 36.2 43.9 53.5 62.9 72.5 78.0 79.1 78.5 76.1 71.0 63.5																									
Diurnal Maximums																									
N - Not Valid																									

**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Portable-Kinuso - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

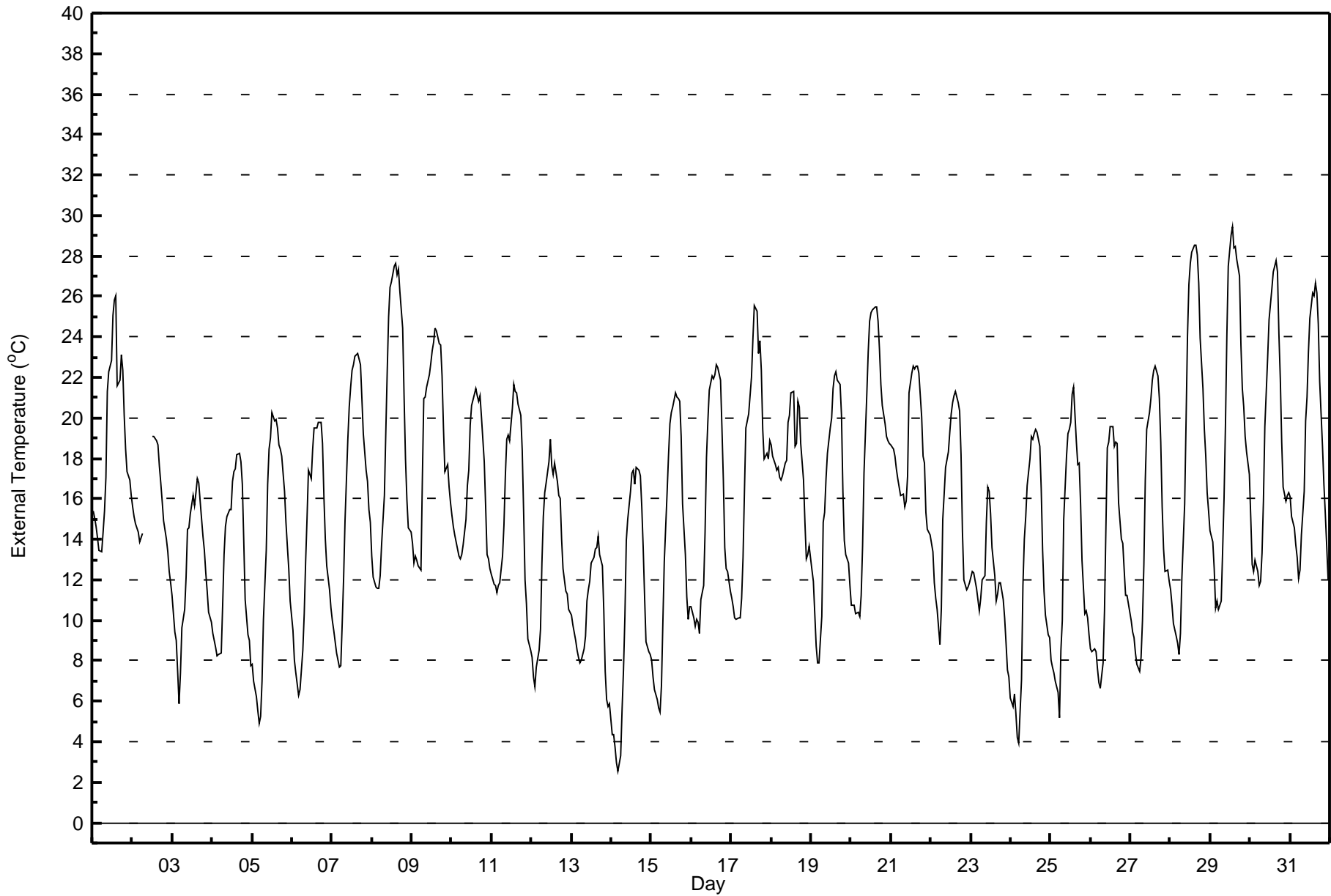
Maximum Value: 29.5 °C on Aug 29 14:00	Maximum Daily Average: 19.8 °C on Aug 29	Hours in Service: 744
Minimum Value: 3 °C on Aug 14 05:00	Minimum Daily Average: 10.1 °C on Aug 13	Hours of Data: 739
Maximum Diurnal Average: 21.5 °C at hour 15	Minimum Diurnal Average: 9.5 °C at hour 6	Hours of Missing Data: 5
Monthly Average: 15.53 °C	Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 8.4 Q <sub>1</sub> = 11.2 Median = 15.4 Q <sub>3</sub> = 19.5 P <sub>90</sub> = 22.5 P <sub>99</sub> = 28.1	Hours of Calibration: 0
		Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	15	15	15	14	13	13	14	15	17	21	22	23	25	26	26	22	22	23	22	20	18	17	17	16	18.9	26.0
2-Aug	16	15	15	14	14	14	14	P	P	P	P	P	19	19	19	19	18	17	16	15	14	13	12	12	15.5	19.1
3-Aug	11	9	9	7	6	7	10	11	12	14	15	15	16	16	16	17	17	16	14	13	12	11	10	10	12.4	17.0
4-Aug	9	9	9	8	8	8	11	13	15	15	15	15	17	17	18	18	18	18	17	14	11	9	9	8	12.9	18.2
5-Aug	8	7	6	6	5	5	7	10	13	17	18	19	20	20	20	19	19	18	18	16	15	14	13	11	13.5	20.2
6-Aug	10	8	7	7	6	7	9	10	13	15	17	17	18	19	19	20	20	20	19	16	14	13	12	11	13.6	19.8
7-Aug	10	10	9	8	8	8	10	12	15	19	21	21	22	23	23	23	23	23	21	19	17	17	15	15	16.3	23.2
8-Aug	13	12	12	12	12	12	14	16	19	22	25	26	27	27	28	27	27	26	24	21	18	16	15	14	19.4	27.6
9-Aug	14	13	13	13	13	12	17	21	21	21	22	23	23	24	24	24	24	24	22	19	17	18	17	16	19.0	24.4
10-Aug	15	15	14	14	13	13	13	14	15	17	17	20	21	21	21	21	21	21	20	18	16	13	13	13	16.6	21.4
11-Aug	12	12	12	11	12	12	13	15	17	19	19	19	20	22	21	21	21	20	18	15	12	11	9	9	15.5	21.6
12-Aug	8	7	7	8	9	10	13	15	16	17	18	19	18	17	18	17	16	16	14	13	11	11	11	10	13.2	18.9
13-Aug	10	10	9	9	8	8	8	9	9	11	11	12	13	13	14	14	14	13	13	10	7	6	6	6	10.1	14.2
14-Aug	4	4	4	3	3	3	6	8	10	14	15	16	17	17	17	18	17	17	16	14	11	9	8	8	10.8	17.5
15-Aug	8	7	7	6	6	5	7	10	13	16	18	20	20	21	21	21	21	21	19	16	13	11	10	11	13.6	21.2
16-Aug	11	10	10	10	10	9	11	12	14	18	20	21	22	22	22	23	22	22	19	17	14	13	12	11	15.6	22.6
17-Aug	11	11	10	10	10	10	11	13	16	20	20	21	22	24	26	25	23	24	22	19	18	18	18	19	17.6	25.5
18-Aug	19	18	18	17	18	17	17	17	18	18	20	20	21	21	19	19	21	21	19	17	15	13	13	14	17.8	21.3
19-Aug	12	12	10	9	8	8	10	15	15	17	18	20	20	21	22	22	22	22	20	16	14	13	13	12	15.5	22.3
20-Aug	11	11	11	10	10	10	11	14	17	21	23	25	25	25	25	25	25	23	22	21	20	19	19	19	18.5	25.5
21-Aug	19	18	18	18	17	17	16	16	16	16	17	21	22	23	22	23	23	22	20	18	18	15	15	14	18.5	22.6
22-Aug	14	13	12	11	11	9	11	15	16	18	18	19	20	21	21	21	21	20	18	14	12	12	12	12	15.4	21.3
23-Aug	12	12	12	12	11	10	11	12	12	15	17	16	15	14	12	11	11	12	12	11	10	9	8	7	11.9	16.6
24-Aug	6	6	6	5	4	4	7	12	14	15	17	18	19	19	19	19	19	19	17	13	11	10	9	9	12.5	19.4
25-Aug	8	8	7	7	6	5	9	10	15	18	19	19	20	21	21	19	18	18	16	13	10	10	10	9	13.2	21.5
26-Aug	9	8	9	8	8	7	7	8	10	15	19	19	20	20	19	19	19	16	14	14	12	11	11	11	12.9	19.6
27-Aug	10	9	9	8	8	7	8	10	13	17	19	20	21	22	22	23	22	21	19	16	14	12	13	12	14.8	22.5
28-Aug	11	11	10	9	9	8	9	12	16	20	24	27	28	28	29	29	28	27	24	21	19	18	16	15	18.7	28.6
29-Aug	14	14	13	11	11	11	11	13	16	20	24	27	29	29	28	28	28	27	24	21	21	19	18	17	19.8	29.5
30-Aug	15	13	12	13	12	12	12	13	16	20	23	25	26	26	27	28	27	24	22	19	17	16	16	16	18.7	27.8
31-Aug	16	15	15	14	13	12	12	14	16	20	21	23	25	26	26	27	26	25	22	19	17	15	14	12	18.5	26.7
	11.7	11.1	10.6	10.1	9.7	9.5	10.9	12.8	14.9	17.5	19.1	20.3	21.0	21.4	21.5	21.3	21.0	20.5	18.8	16.5	14.5	13.4	12.7	12.2		Diurnal Average
	18.7	18.4	18.1	17.5	17.5	17.0	17.0	21.0	21.1	22.3	25.0	27.5	29.0	29.5	28.5	28.6	28.1	27.0	24.5	21.5	20.5	19.1	18.9	18.9		Diurnal Maximum

P - Power Failure



# Hourly Averages for External Temperature at Portable-Kinuso August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Portable-Kinuso  
 August 1, 2009 to September 1, 2009  
 WS (km/h), WD (deg)

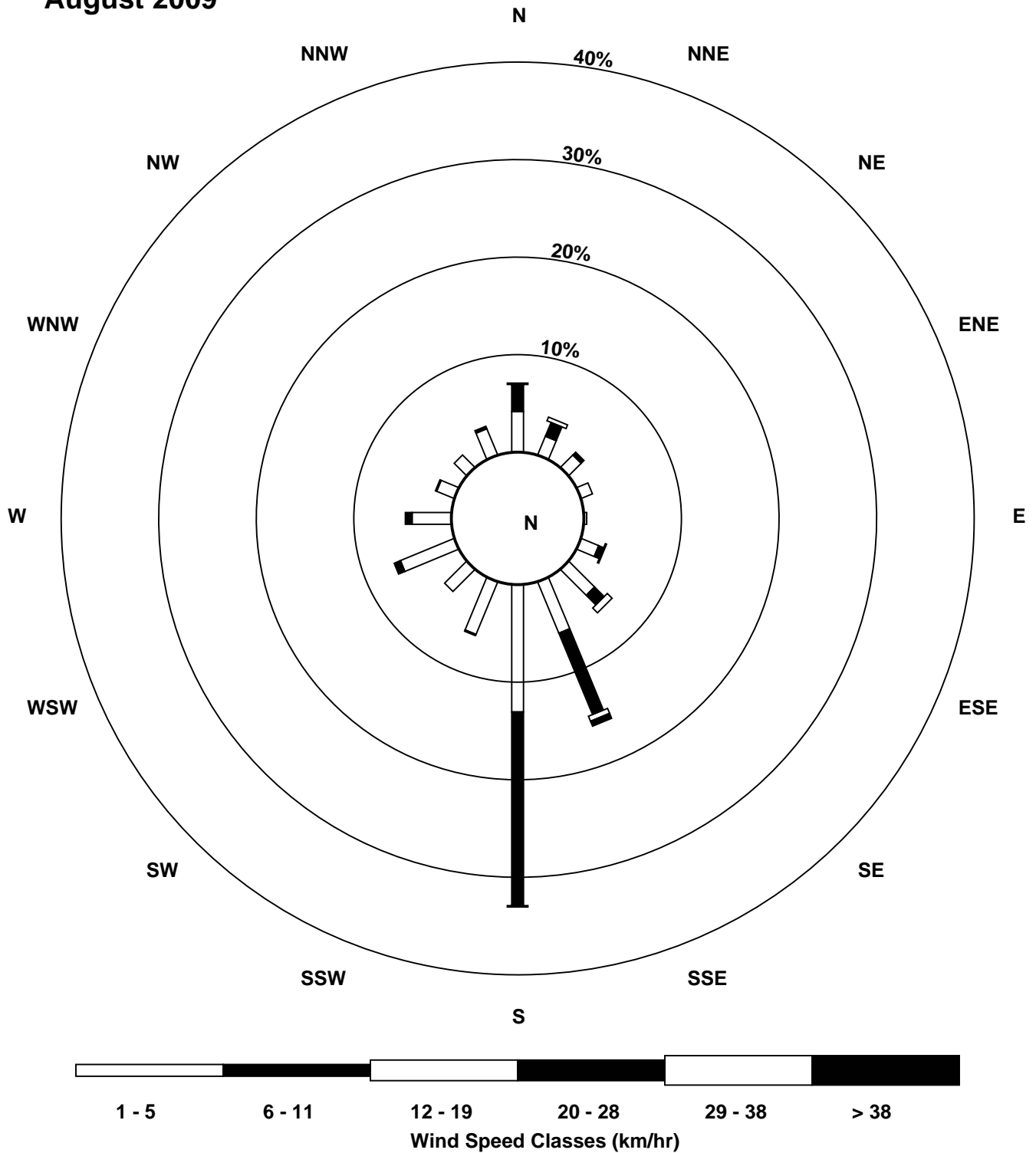
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	8	10	12	11	11	12	11	7	2	0	4	3	3	4	4	2	3	2	5	4	5	4	4	4	4.6	12.0
Dir	175	180	168	171	177	177	173	184	20	193	170	203	237	324	328	314	192	210	178	172	173	176	168	188	180.7	168.2
2 Spd	6	8	8	8	8	9	9	P	P	P	P	P	1	9	12	10	13	12	3	2	1	1	1	2	1.0	12.9
Dir	185	168	176	177	171	172	168	P	P	P	P	P	334	7	1	10	15	28	4	215	159	202	125	213	111.0	14.8
3 Spd	1	2	5	3	2	4	5	4	2	7	2	2	2	5	4	4	2	3	1	2	2	2	2	3	2.5	6.8
Dir	184	174	170	127	175	180	171	169	171	139	170	190	138	52	141	154	146	189	270	128	200	198	175	183	161.2	138.9
4 Spd	3	2	6	5	5	3	6	5	3	6	10	4	4	6	4	3	5	4	1	1	2	1	4	4	0.4	10.3
Dir	163	144	183	173	179	164	177	158	48	6	14	348	354	18	4	349	5	353	301	218	182	187	199	181	68.9	14.0
5 Spd	6	6	7	6	5	6	8	6	4	1	2	3	2	6	5	9	1	1	2	2	3	4	5	6	2.7	8.7
Dir	181	173	182	178	157	161	170	148	155	117	55	42	38	34	40	52	222	12	127	184	186	161	178	177	150.6	51.7
6 Spd	9	9	9	8	8	8	7	8	8	5	4	3	3	2	4	5	6	7	6	1	4	6	6	7	3.5	9.4
Dir	182	165	181	176	178	177	175	172	168	157	112	72	75	74	38	23	15	28	35	114	147	161	176	166	151.3	164.7
7 Spd	6	7	8	7	6	6	6	7	6	2	1	4	2	3	5	6	8	8	7	4	5	10	9	8	2.6	9.6
Dir	190	187	179	186	171	163	170	166	169	142	23	22	67	31	25	22	28	30	10	41	140	145	147	147	135.3	145.3
8 Spd	6	6	8	7	9	11	10	10	9	9	5	3	3	3	3	3	3	3	2	2	3	3	3	4	4.8	10.7
Dir	193	183	171	180	172	161	157	155	157	169	166	238	257	231	238	242	219	250	220	181	181	192	195	188	181.3	161.1
9 Spd	3	3	3	2	2	3	3	2	3	4	4	4	3	3	4	6	5	5	1	2	3	6	5	6	0.4	6.1
Dir	185	172	122	111	136	105	128	200	267	251	271	318	314	344	347	356	16	14	71	136	185	178	164	171	177.1	171.1
10 Spd	5	6	6	7	8	8	7	5	4	3	1	1	3	3	4	6	4	4	3	2	4	3	5	4	2.1	8.0
Dir	165	182	178	174	167	169	169	158	190	194	209	330	300	289	304	357	356	1	41	126	266	143	177	180	180.2	169.3
11 Spd	2	1	3	3	5	4	5	5	4	4	5	4	5	5	6	5	4	4	3	3	4	4	3	3	3.1	5.9
Dir	117	165	163	160	188	196	173	187	218	239	235	233	239	256	261	266	256	251	226	183	179	191	191	193	215.4	260.8
12 Spd	2	4	4	3	3	3	4	5	5	7	6	6	6	5	5	4	4	5	4	3	3	2	2	2	3.4	6.6
Dir	158	188	180	187	193	194	210	227	252	259	259	257	261	263	263	283	244	287	297	261	261	254	213	252	243.8	258.5
13 Spd	2	2	3	4	4	3	2	3	4	4	4	4	4	6	3	4	2	1	1	2	2	2	2	1	1.9	6.1
Dir	254	261	248	241	239	238	242	257	252	250	257	267	251	347	331	330	302	288	230	186	178	112	171	180	258.2	346.6
14 Spd	3	7	7	6	7	7	7	6	4	4	4	3	3	5	9	11	11	10	8	4	2	3	6	7	1.0	11.4
Dir	171	177	187	180	180	178	173	172	155	153	6	45	359	29	22	11	17	20	11	351	349	199	184	161	96.6	17.1
15 Spd	8	7	8	8	7	6	9	6	5	2	4	3	4	4	3	3	1	3	1	3	2	2	2	5	2.1	9.4
Dir	177	191	188	188	178	182	170	167	159	67	4	336	6	340	326	344	294	9	297	232	212	91	161	182	183.3	169.9
16 Spd	6	6	6	6	6	6	6	6	5	3	1	2	3	2	3	4	3	3	1	2	2	4	8	8	2.6	8.4
Dir	171	177	179	170	179	175	180	167	164	113	193	216	342	7	353	351	318	339	233	195	182	190	175	172	177.4	171.8
17 Spd	9	8	6	8	8	8	10	8	5	4	3	4	4	3	4	4	3	4	3	3	3	3	3	4	4.5	9.5
Dir	173	172	179	185	185	185	176	170	162	179	212	204	201	221	244	259	254	242	230	176	191	214	233	253	195.5	175.7
18 Spd	5	4	4	5	6	6	4	5	5	4	3	4	4	8	13	5	2	2	2	2	2	2	1	3	2.8	13.2
Dir	251	246	247	258	260	259	269	274	283	279	275	283	315	355	14	352	270	270	264	232	174	171	167	245	284.9	14.0
19 Spd	3	2	1	2	2	3	3	2	1	2	3	3	3	3	3	3	6	5	3	2	2	5	7	8	0.6	7.9
Dir	182	180	117	110	145	202	131	118	302	260	336	300	325	296	306	300	2	16	72	120	178	180	163	172	170.9	171.9
20 Spd	7	8	8	9	8	10	10	8	6	8	8	8	11	11	12	12	11	9	7	8	10	11	12	12	8.7	12.4
Dir	176	177	177	170	173	176	178	177	173	150	154	152	146	146	134	122	121	111	112	121	129	134	140	142	147.6	142.0
21 Spd	16	19	23	21	21	20	18	5	3	10	7	2	2	5	6	6	5	2	2	2	4	2	9	5	6.5	23.1
Dir	144	145	149	155	152	150	147	149	130	143	169	230	30	13	358	9	30	19	356	210	272	225	137	166	145.6	148.5
22 Spd	5	6	4	4	2	1	3	4	3	4	6	6	5	6	4	4	4	1	1	2	4	3	3	9	2.7	8.7
Dir	172	186	172	181	179	130	160	209	226	252	258	260	271	257	258	248	270	281	83	141	194	181	184	166	213.6	166.4

**Peace Airshed Zone Association  
Summary of Hourly Averages**

Portable-Kinuso  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	6	7	5	8	5	5	6	9	8	1	2	3	3	2	3	4	6	5	7	6	6	4	3	5	4.3	8.7	
Dir	179	164	133	160	174	129	168	160	165	197	251	328	266	238	220	129	155	160	160	166	174	170	182	167.3	160.3		
24 Spd	4	4	4	3	3	3	3	4	4	5	5	4	4	3	2	4	4	5	3	2	3	3	6	8	1.8	8.3	
Dir	165	165	176	187	182	177	182	207	251	262	263	263	263	273	295	332	347	6	42	124	179	189	181	177	213.9	176.9	
25 Spd	7	7	7	6	4	1	5	0	7	5	9	13	14	10	5	7	2	1	1	2	2	6	8	7	4.5	13.9	
Dir	166	180	176	180	172	176	127	78	139	150	147	148	150	167	267	285	305	302	203	188	178	183	162	185	168.4	150.1	
26 Spd	9	9	9	7	4	6	8	10	9	5	2	5	6	4	1	1	2	1	1	2	2	2	7	7	3.2	10.4	
Dir	179	178	174	175	179	180	176	172	171	163	6	348	9	3	353	134	355	195	83	133	211	180	164	172	171.3	172.2	
27 Spd	8	8	9	8	8	9	11	8	7	4	1	2	6	7	8	7	6	5	3	3	3	4	6	7	2.5	10.9	
Dir	176	183	180	181	181	179	182	168	165	160	333	9	8	12	10	4	9	6	12	173	195	193	176	179	170.2	181.5	
28 Spd	9	9	7	6	5	7	7	7	7	4	5	9	10	11	11	11	11	8	9	8	8	8	7	8	7.8	11.1	
Dir	173	182	172	157	160	166	179	178	159	168	174	155	153	155	151	148	149	145	153	169	177	166	179	162.3	151.0		
29 Spd	9	8	7	3	6	6	8	6	9	8	4	5	7	4	6	3	1	1	2	6	8	9	7	8	4.5	8.9	
Dir	182	176	189	156	182	171	165	139	167	156	182	164	151	27	347	324	312	215	175	151	155	165	185	185	169.1	181.8	
30 Spd	3	3	4	7	6	8	9	10	8	6	4	1	4	2	3	4	3	6	1	2	2	3	6	9	3.1	9.8	
Dir	197	198	179	181	185	185	181	173	176	169	182	70	1	75	71	103	48	5	340	198	198	199	176	161	170.4	172.9	
31 Spd	8	9	9	7	7	5	7	6	5	3	4	4	6	5	6	2	2	1	1	1	2	2	2	2	1.9	8.9	
Dir	180	181	183	177	170	153	170	167	162	185	40	358	3	356	352	319	348	355	189	149	204	197	181	180	173.2	181.2	
Spd	5.6	6.1	6.4	6.0	5.8	5.8	6.6	5.3	3.9	2.7	1.1	0.8	0.4	1.5	2.2	2.0	1.6	1.7	0.6	1.9	2.7	3.6	4.7	5.3	Diurnal Average		
Dir	175.7	176.0	174.7	174.3	175.6	172.6	170.8	172.2	174.4	175.9	204.1	231.9	265.9	357.2	351.4	359.4	10.2	13.4	76.5	160.7	177.6	173.6	169.4	175.0	Diurnal Maximum		
Spd	16.3	19.4	23.1	20.7	20.9	19.7	18.0	10.4	8.9	9.8	10.3	13.1	13.9	11.0	13.2	12.3	12.9	11.9	8.7	8.1	9.7	10.6	11.7	12.4	Diurnal Maximum		
Dir	144.1	145.0	148.5	155.1	152.4	149.6	147.5	172.2	157.3	142.7	14.0	147.9	150.1	155.3	14.0	122.0	14.8	28.3	144.9	121.4	128.8	133.9	139.7	142.0	Diurnal Maximum		
Maximum Speed Value: 23 km/h on Aug 21 03:00																		Minimum Speed Value: 0 km/h on Aug 1 10:00						Hours in Service:		744	
Maximum Daily Speed Average: 8.7 km/h on Aug 20																		Minimum Daily Speed Average: 0.4 km/h on Aug 13						Hours of Data:		739	
Maximum Diurnal Speed Average: 6.6 km/h at hour 7																		Minimum Diurnal Speed Average: 0.4 km/h at hour 13						Hours of Missing Data:		5	
Monthly Average Velocity: 2.70 km/h 173.35 deg																		Speed Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 2.8 Median = 4.4 Q <sub>3</sub> = 6.7 P <sub>90</sub> = 8.8 P <sub>99</sub> = 14.8						Percent Operational Time:		99.3	
All monthly, daily, and diurnal averages have been calculated using vector methods																											
P - Power Failure																											
Frequency Distribution																											
		Speed Range (km/h)																									
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	47	32	5	0	0	0	84																				
NorthEast	21	8	1	0	0	0	30																				
East	18	2	0	0	0	0	20																				
SouthEast	40	40	12	5	0	0	97																				
South	138	201	3	0	0	0	342																				
SouthWest	57	0	0	0	0	0	57																				
West	56	17	0	0	0	0	73																				
NorthWest	36	0	0	0	0	0	36																				
Total	413	300	21	5	0	0	739																				

# Wind Rose for WS at Portable-Kinuso August 2009



**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Portable-Kinuso - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 23 km/h on Aug 21 03:00	Maximum Daily Speed Average: 9.7 km/h on Aug 21	Hours in Service: 744
Minimum Speed: 1 km/h on Aug 31 19:00	Minimum Daily Speed Average: 3.7 km/h on Aug 3	Hours of Data: 739
Maximum Diurnal Speed Average: 7.3 km/h at hour 7	Minimum Diurnal Speed Average: 3.3 km/h at hour 20	Hours of Missing Data: 5
Monthly Average Speed: 5.73 km/h	Percentiles: P <sub>1</sub> = 1.8 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 3.7 Median = 5.4 Q <sub>3</sub> = 7.1 P <sub>90</sub> = 9.0 P <sub>99</sub> = 14.9	Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	8	10	12	12	11	12	11	7	6	5	5	4	5	5	5	4	3	3	5	4	5	4	5	4	6.4	12.1
2-Aug	6	8	9	9	8	9	9	P	P	P	P	P	3	10	12	10	13	12	4	2	2	2	2	2	7.0	13.1
3-Aug	3	3	5	4	2	4	5	4	3	7	3	3	4	6	5	5	4	4	2	3	3	2	3	3	3.7	7.2
4-Aug	3	3	6	6	5	3	6	5	4	7	11	6	6	7	6	5	6	4	2	2	2	3	4	4	4.9	10.8
5-Aug	6	6	7	6	6	6	8	6	5	3	4	6	5	7	7	9	3	2	3	2	4	5	5	6	5.3	9.3
6-Aug	9	10	9	8	8	8	7	8	8	6	5	5	6	4	6	6	7	7	6	2	4	6	6	7	6.6	9.5
7-Aug	6	7	8	7	6	6	6	7	6	3	4	5	5	6	6	7	8	8	7	5	5	10	9	8	6.5	9.7
8-Aug	6	7	8	8	9	11	10	10	9	10	6	4	4	5	4	4	5	4	3	2	3	3	4	4	5.9	10.8
9-Aug	3	3	4	3	3	3	3	3	4	4	5	5	5	5	5	6	6	5	2	3	3	6	7	6	4.4	7.3
10-Aug	6	6	6	7	8	8	7	6	4	5	2	4	5	4	5	6	5	5	4	3	4	6	5	5	5.3	8.1
11-Aug	4	4	4	4	5	4	5	5	5	5	6	5	6	6	7	6	5	5	4	3	4	4	3	3	4.7	6.8
12-Aug	3	4	4	4	4	4	4	5	6	7	8	7	7	6	6	6	5	6	5	4	3	3	3	3	4.8	7.6
13-Aug	3	3	4	4	4	4	3	3	5	5	5	5	5	7	5	4	4	3	2	2	2	3	3	4	3.8	7.2
14-Aug	3	7	7	6	7	7	7	6	5	4	5	6	5	6	10	12	12	11	8	4	3	3	6	7	6.5	11.8
15-Aug	8	7	8	8	8	6	10	6	6	4	5	5	5	6	4	5	3	3	3	3	3	3	3	6	5.3	9.6
16-Aug	6	6	6	6	6	6	6	6	6	5	5	4	5	4	5	5	4	3	2	2	2	4	8	8	5.0	8.5
17-Aug	9	8	7	8	8	8	10	8	5	4	4	5	5	4	6	6	4	4	3	3	3	4	4	5	5.6	9.6
18-Aug	6	5	5	6	7	6	5	6	6	5	4	5	5	10	14	7	4	3	4	2	2	3	2	4	5.3	13.7
19-Aug	3	3	2	3	2	3	3	3	3	4	4	5	5	5	4	4	6	5	4	3	2	6	7	8	4.1	8.0
20-Aug	7	8	9	9	8	10	10	8	6	9	8	9	12	11	13	13	12	9	8	8	10	11	12	13	9.6	12.8
21-Aug	16	20	23	21	21	20	18	7	4	10	7	4	5	6	6	6	6	3	3	2	5	4	9	5	9.7	23.3
22-Aug	6	6	4	4	3	3	4	4	4	5	7	7	6	7	5	5	5	3	3	2	4	3	4	9	4.6	9.0
23-Aug	7	8	8	8	6	5	7	9	8	3	3	4	4	3	4	4	6	5	7	6	6	5	3	5	5.6	8.9
24-Aug	4	4	4	4	3	3	3	4	5	6	6	5	5	5	4	5	5	5	3	2	4	3	6	8	4.4	8.4
25-Aug	7	7	7	6	5	2	6	3	7	5	9	13	14	11	7	8	4	2	2	2	2	6	8	7	6.4	14.1
26-Aug	9	9	9	7	5	7	8	11	9	5	4	5	6	5	3	2	3	2	4	4	2	2	7	7	5.7	10.5
27-Aug	8	8	9	8	8	9	11	8	7	5	3	4	7	7	9	7	6	5	3	3	3	4	7	7	6.6	11.0
28-Aug	9	9	7	6	6	8	7	7	7	4	6	9	11	12	12	11	11	8	9	8	8	8	7	8	8.2	11.6
29-Aug	9	8	7	4	6	6	8	6	9	8	4	6	7	7	6	4	3	2	2	6	8	9	7	8	6.2	9.2
30-Aug	4	3	5	7	6	8	10	10	8	6	4	4	5	4	4	4	5	7	3	2	2	3	7	9	5.3	9.9
31-Aug	8	9	9	7	7	5	7	6	5	4	4	5	6	6	7	3	3	2	1	1	3	2	2	2	4.8	9.0

6.3	6.7	7.1	6.8	6.5	6.7	7.3	6.4	5.9	5.4	5.2	5.4	5.8	6.2	6.5	6.1	5.6	5.0	3.8	3.3	3.8	4.5	5.4	6.0	Diurnal Average	
16.5	19.6	23.3	21.0	21.1	19.9	18.3	10.5	9.1	10.0	10.8	13.4	14.1	11.5	13.7	12.7	13.1	12.0	8.8	8.3	9.9	10.7	11.9	12.7	Diurnal Maximum	

P - Power Failure  
 All monthly, daily, and diurnal averages have been calculated using scalar methods

**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Portable-Kinuso - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 97.6 deg on Aug 25 08:00																					Hours in Service:	744			
Minimum Value: 5.7 deg on Aug 28 01:00																					Hours of Data:	739			
Percentiles: P <sub>1</sub> = 7.4 P <sub>10</sub> = 10.3 Q <sub>1</sub> = 14.2 Median = 27.7 Q <sub>3</sub> = 49.4 P <sub>90</sub> = 65.1 P <sub>99</sub> = 88.4																					Hours of Missing Data:	5			
																					Hours of Calibration:	0			
																					Percent Operational Time:	99.3			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	11	11	8	9	8	8	11	22	81	87	33	51	53	49	37	65	30	39	15	16	16	16	33	21	87.4
2-Aug	11	10	13	9	12	10	9	P	P	P	P	P	89	16	13	13	11	7	68	23	67	39	53	35	88.7
3-Aug	70	40	14	47	29	14	14	16	27	20	27	35	60	28	59	33	72	27	76	37	43	22	34	15	76.0
4-Aug	24	43	27	38	17	27	14	25	46	36	19	63	59	38	68	66	49	48	89	64	23	48	10	32	89.1
5-Aug	13	15	12	13	25	18	21	18	23	75	82	76	88	39	57	23	66	84	59	34	44	40	12	12	88.2
6-Aug	8	8	11	10	9	10	12	11	13	20	44	54	63	82	46	58	36	21	17	53	26	10	11	12	81.5
7-Aug	12	11	8	10	16	13	17	14	20	62	94	60	87	75	41	42	14	9	12	45	25	7	7	14	93.9
8-Aug	14	11	10	11	10	9	8	11	11	16	38	52	52	61	52	58	56	56	47	23	15	25	22	17	60.9
9-Aug	18	25	51	52	46	35	30	56	49	47	54	50	65	62	58	37	29	24	82	35	20	29	49	19	81.8
10-Aug	24	9	13	15	9	10	15	22	18	61	67	82	59	56	51	41	53	44	41	24	39	78	34	26	82.0
11-Aug	73	78	35	53	20	32	24	36	45	49	48	37	39	40	37	40	47	47	54	31	14	11	24	40	78.4
12-Aug	42	17	15	28	29	24	37	42	46	35	38	44	36	36	43	54	53	46	49	40	35	45	55	58	57.8
13-Aug	68	56	38	35	34	39	54	49	44	47	50	48	48	44	59	41	75	80	65	29	31	52	39	78	80.0
14-Aug	43	13	12	12	12	15	20	17	24	36	54	65	81	53	27	18	14	12	9	45	79	12	12	12	81.1
15-Aug	10	10	13	10	12	18	10	17	23	69	46	58	64	54	69	60	69	59	73	38	56	60	39	20	72.6
16-Aug	13	14	13	15	22	15	14	16	21	61	95	79	65	90	56	58	60	66	70	13	24	19	13	10	95.1
17-Aug	10	14	19	14	11	12	10	13	17	28	47	34	26	50	45	48	37	47	43	14	16	40	39	40	49.6
18-Aug	43	47	51	44	37	35	46	34	50	49	59	59	49	34	16	60	67	61	58	50	46	47	62	54	67.1
19-Aug	25	24	54	41	39	19	32	52	82	68	59	62	67	64	64	64	38	30	40	26	24	20	12	7	82.3
20-Aug	7	9	10	10	10	7	10	11	13	15	20	25	18	19	16	15	13	12	13	11	11	10	10	12	24.7
21-Aug	8	8	7	9	7	9	11	68	54	12	19	68	83	45	25	21	24	59	75	23	52	70	12	35	82.7
22-Aug	21	19	16	31	58	63	32	34	50	57	40	40	46	42	46	51	47	71	82	17	20	31	45	14	81.9
23-Aug	22	20	61	19	23	38	20	12	31	65	58	64	56	43	48	31	20	18	14	14	19	18	31	15	64.8
24-Aug	23	19	21	25	19	21	22	34	40	42	46	52	58	53	67	59	51	16	43	20	27	29	21	8	66.6
25-Aug	8	9	9	19	26	75	40	98	14	23	18	10	10	23	54	33	71	82	68	41	27	22	11	15	97.6
26-Aug	9	12	11	19	26	18	14	9	19	22	85	43	36	46	71	55	59	58	88	72	39	50	19	8	88.0
27-Aug	9	10	10	12	11	10	9	11	16	32	97	79	38	27	16	26	15	12	42	24	11	19	13	16	97.3
28-Aug	6	9	12	12	32	13	12	13	11	19	24	17	15	18	17	13	11	11	9	7	11	10	17	12	31.5
29-Aug	9	13	40	46	15	19	14	20	17	15	31	29	24	68	43	38	75	44	18	14	11	19	18	11	74.8
30-Aug	29	22	24	12	28	14	9	9	15	18	38	82	54	67	53	44	63	17	73	29	23	17	8	9	82.0
31-Aug	14	8	9	10	13	28	13	13	15	38	28	42	33	36	25	54	63	84	64	56	33	21	23	17	83.8
73.0 78.4 60.6 53.2 58.1 75.2 53.9 97.6 82.3 87.4 97.3 82.0 88.7 89.8 71.2 65.7 74.8 84.5 89.1 71.6 78.6 78.2 61.9 77.7																									
P - Power Failure																									

# PASZA

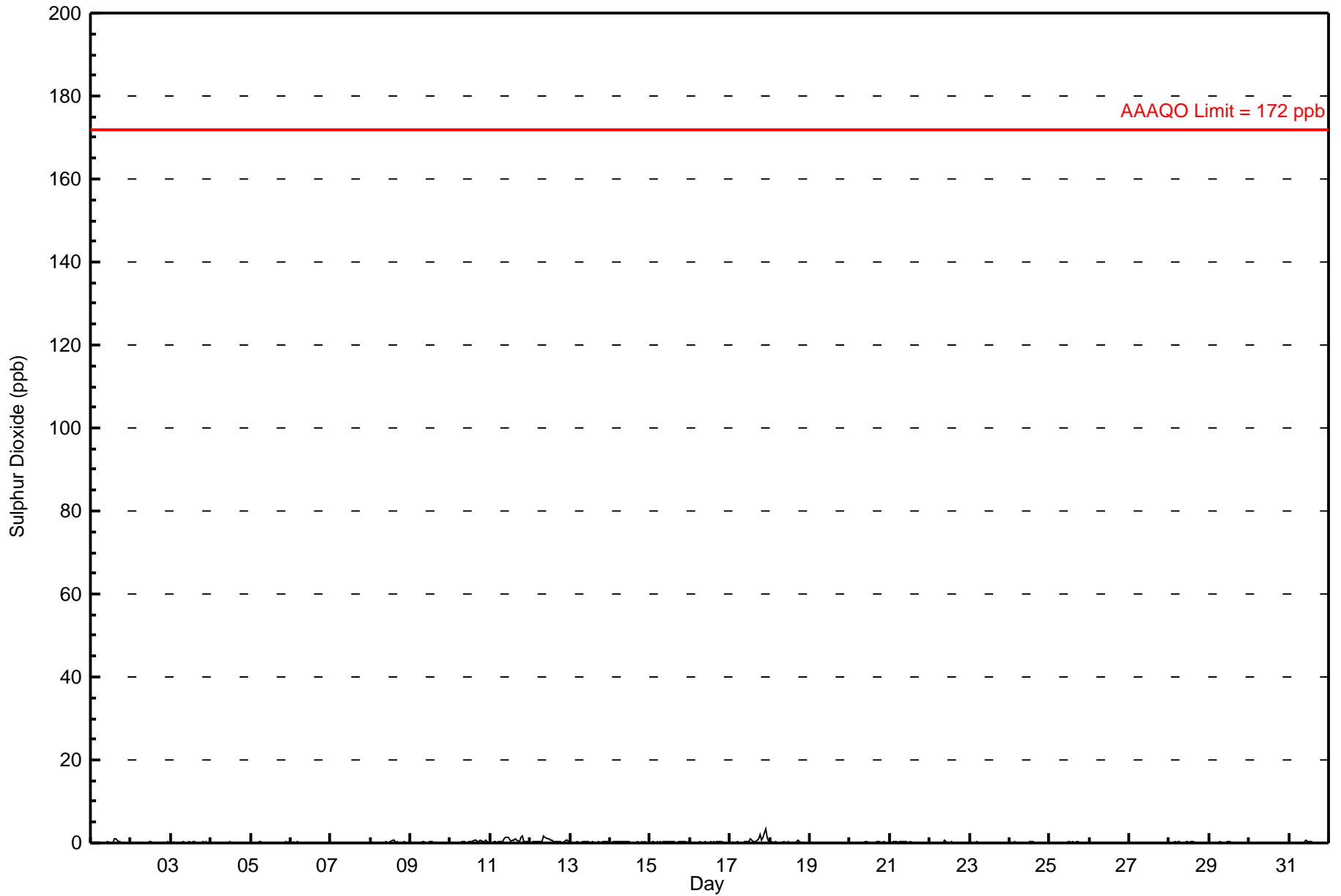
## Valleyview Station

### Monthly Summary Tables, Graphs and Roses



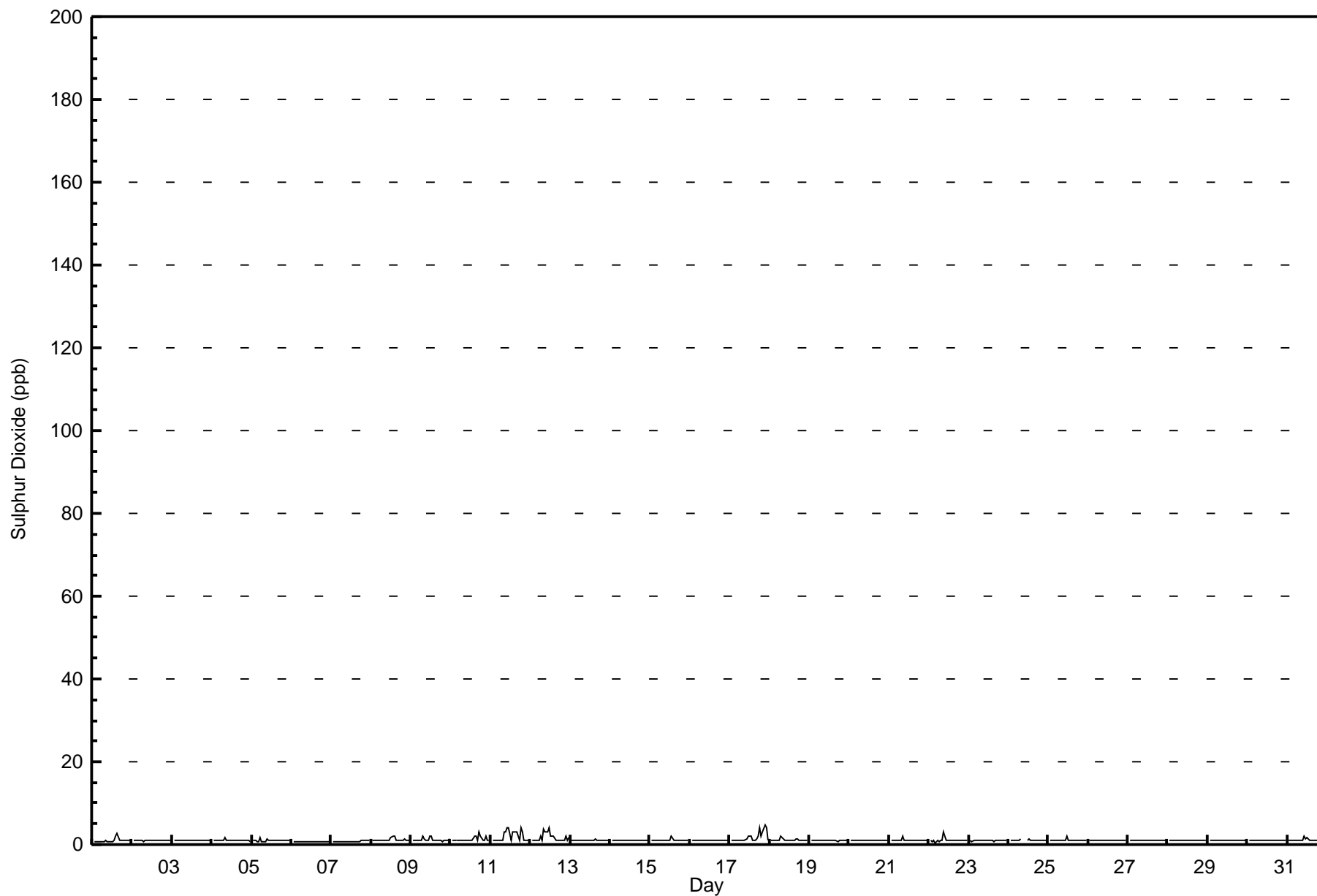


# Hourly Averages for SO<sub>2</sub> at Valleyview August 2009

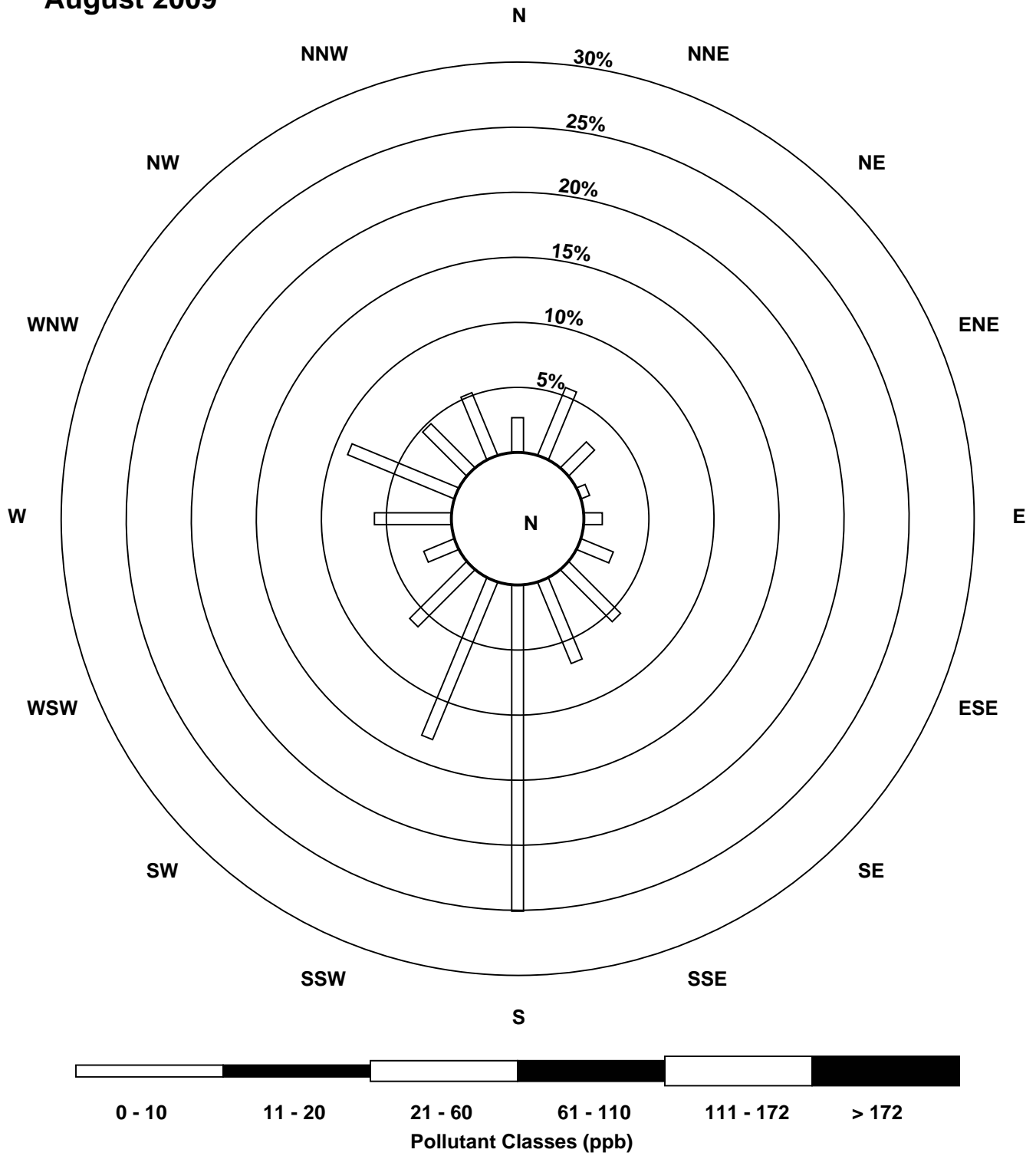




# Hourly Maximums for SO<sub>2</sub> at Valleyview August 2009



# Pollutant Rose for SO<sub>2</sub> at Valleyview August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

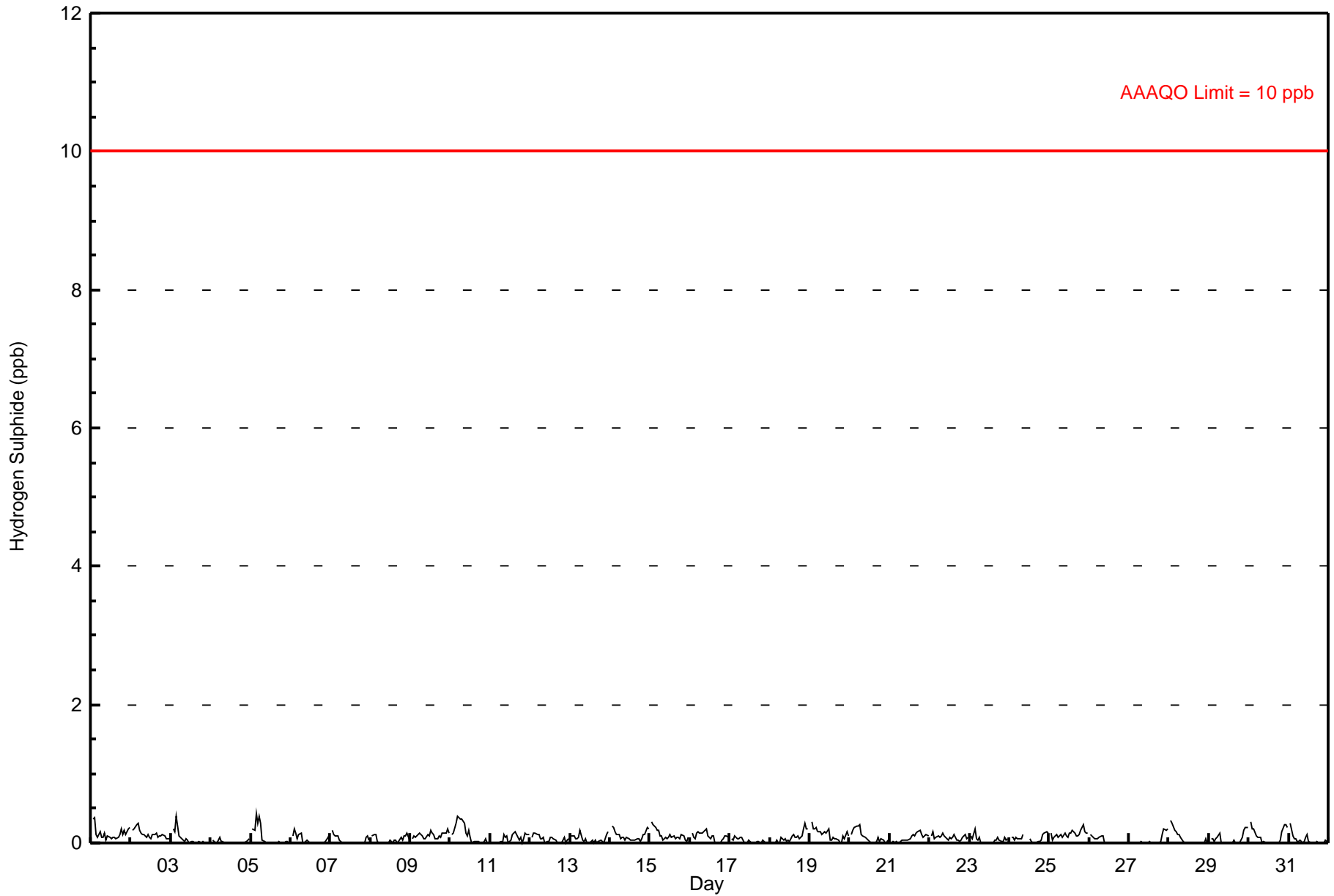
**Valleyview - Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
August 1, 2009 to September 1, 2009**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 0.4 ppb on Aug 5 04:00	Maximum Daily Average: 0.1 ppb on Aug 1
Minimum Value: 0 ppb on Aug 3 15:00	Hours of Data: 710
Maximum Diurnal Average: 0.1 ppb at hour 2	Hours of Missing Data: 34
Monthly Average: 0.07 ppb	Hours of Calibration: 34
Minimum Daily Average: 0.0 ppb on Aug 4	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.0 ppb at hour 17	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 0.3	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
2-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
5-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
6-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
7-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
8-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
11-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
13-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
23-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
24-Aug	A	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
28-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
30-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
31-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	Diurnal Average	
--	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	Diurnal Maximum	

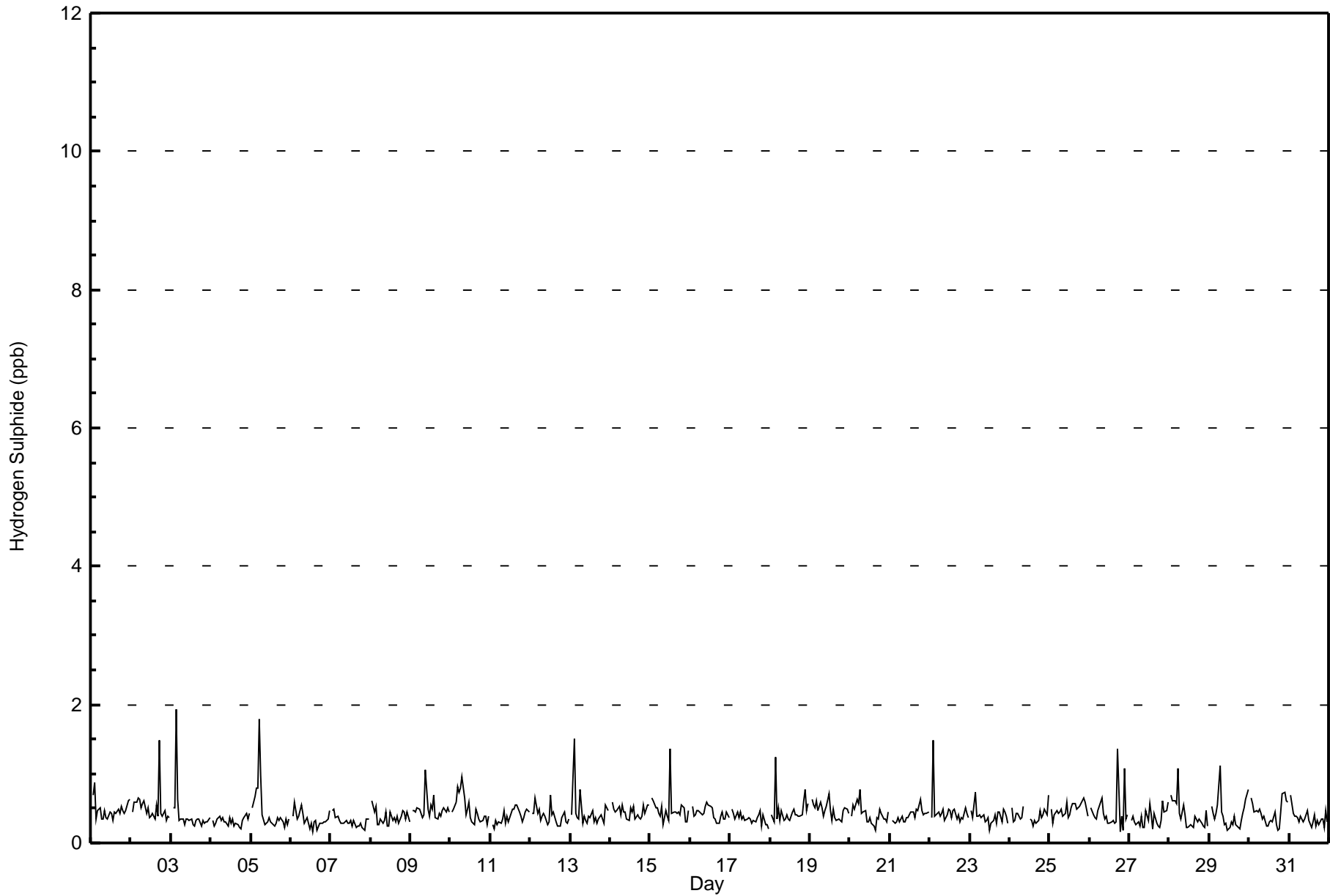
C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb

# Hourly Averages for H<sub>2</sub>S at Valleyview August 2009



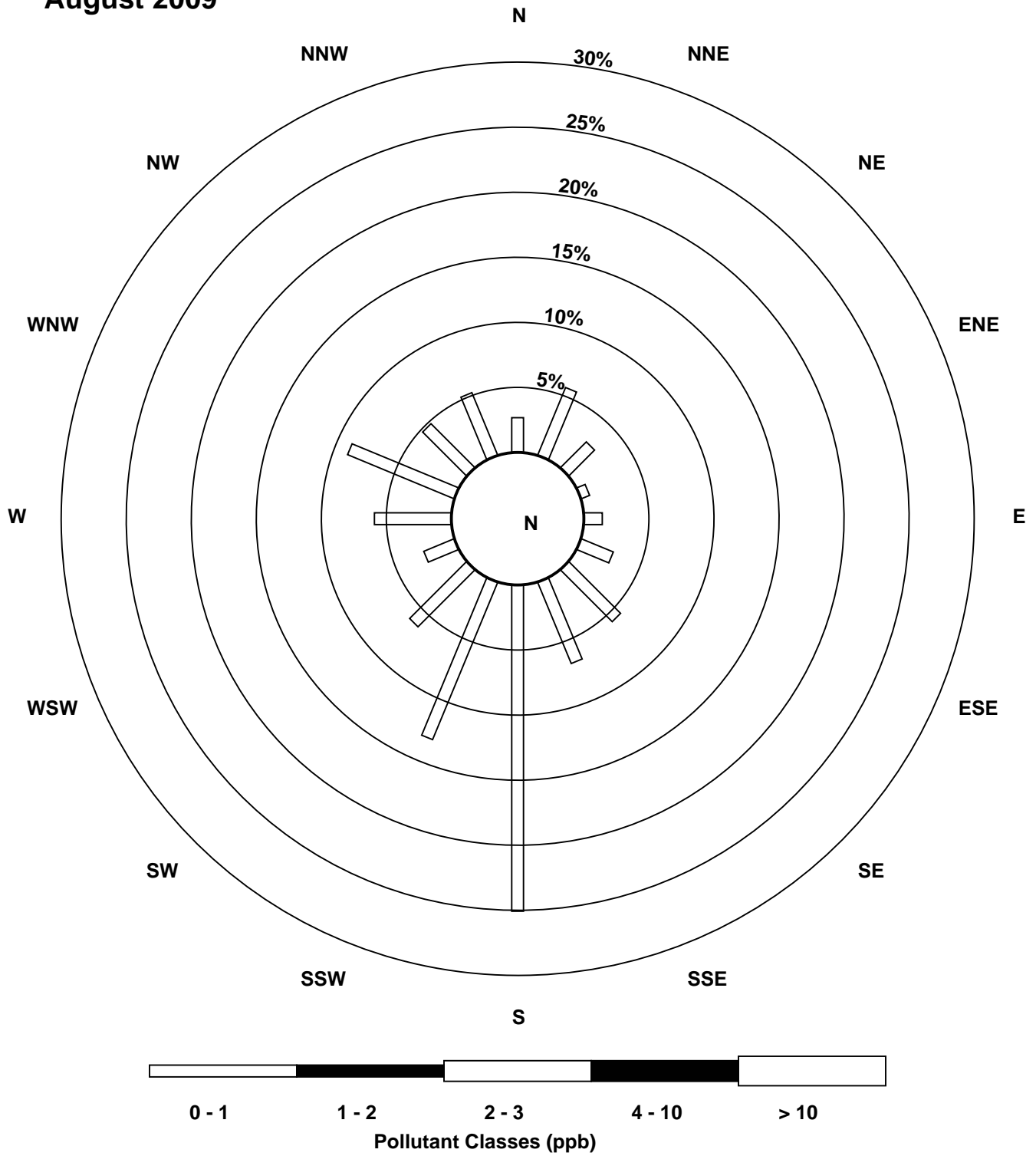


# Hourly Maximums for H<sub>2</sub>S at Valleyview August 2009





# Pollutant Rose for H<sub>2</sub>S at Valleyview August 2009



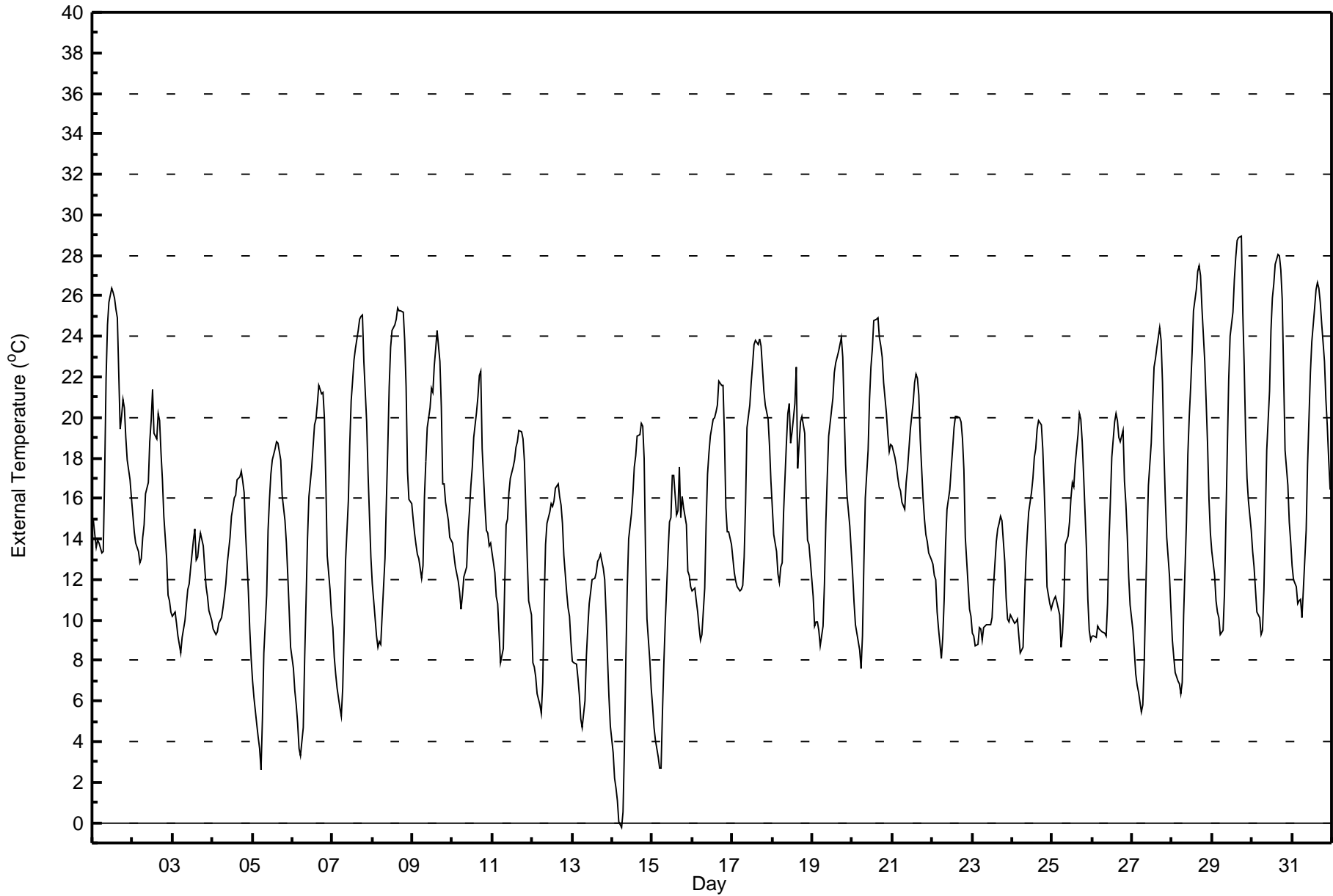
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - External Temperature (ET) - °C  
August 1, 2009 to September 1, 2009**

Maximum Value: 29.0 °C on Aug 29 18:00	Maximum Daily Average: 19.4 °C on Aug 1	Hours in Service: 744
Minimum Value: 0 °C on Aug 14 06:00	Minimum Daily Average: 9.3 °C on Aug 13	Hours of Data: 744
Maximum Diurnal Average: 21.0 °C at hour 17	Minimum Diurnal Average: 8.4 °C at hour 6	Hours of Missing Data: 0
Monthly Average: 14.98 °C	Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 8.2 Q <sub>1</sub> = 10.6 Median = 14.4 Q <sub>3</sub> = 19.1 P <sub>90</sub> = 22.8 P <sub>99</sub> = 27.2	Hours of Calibration: 0
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	15	14	14	14	14	13	13	17	22	25	26	26	26	26	25	19	20	21	19	18	17	16	19.4	26.4			
2-Aug	15	14	14	13	13	13	14	15	16	17	19	20	21	19	19	20	20	18	17	15	13	11	11	10	15.8	21.3	
3-Aug	10	10	10	9	9	8	9	10	11	12	12	13	14	14	13	13	14	14	14	13	12	11	10	10	11.4	14.5	
4-Aug	10	9	9	9	10	10	11	11	12	13	14	15	16	16	16	17	17	17	17	16	14	11	10	8	12.9	17.3	
5-Aug	7	6	5	4	4	3	5	8	11	14	16	17	18	18	19	19	18	18	16	15	14	12	10	9	12.0	18.8	
6-Aug	8	7	6	5	4	3	5	8	11	14	16	18	19	20	20	21	22	21	21	20	17	13	12	10	13.3	21.6	
7-Aug	10	8	7	7	6	5	7	10	13	16	19	21	22	23	23	24	25	25	25	23	20	17	15	13	15.9	25.1	
8-Aug	12	11	9	9	9	9	10	13	16	19	22	23	24	25	25	25	25	25	24	22	17	16	16	16	17.9	25.4	
9-Aug	15	14	14	13	13	12	13	16	18	19	20	21	21	23	23	24	23	21	17	17	16	15	14	14	17.3	24.3	
10-Aug	14	13	13	12	11	11	11	12	13	14	15	17	18	19	20	21	22	22	18	16	14	14	14	14	15.3	22.3	
11-Aug	13	12	11	11	9	8	9	12	15	15	16	17	18	18	19	19	19	19	18	15	13	11	10	10	14.4	19.4	
12-Aug	8	8	7	6	6	5	7	11	14	15	15	16	16	16	17	17	16	16	15	13	11	11	10	9	11.8	16.7	
13-Aug	8	8	8	7	6	5	5	6	8	10	11	11	12	12	13	13	13	13	12	10	8	6	5	5	9.3	13.3	
14-Aug	3	2	2	1	0	0	1	4	8	12	14	15	16	18	18	19	19	20	20	18	13	10	8	7	10.3	19.7	
15-Aug	6	5	4	3	3	3	5	8	10	13	15	15	17	17	15	15	18	15	16	16	15	12	12	12	11.2	17.6	
16-Aug	11	12	11	10	10	9	9	12	15	17	18	19	20	20	20	21	22	22	22	19	16	14	14	14	15.7	21.8	
17-Aug	13	12	12	12	11	12	12	13	16	20	21	22	23	24	24	24	24	24	22	21	21	20	19	17	18.1	23.9	
18-Aug	16	14	13	12	12	13	13	15	19	20	21	19	19	21	22	18	19	20	20	19	16	14	14	13	16.7	22.5	
19-Aug	11	10	10	10	10	9	10	12	15	17	19	20	21	22	23	23	23	24	23	20	18	16	15	13	16.4	23.9	
20-Aug	12	11	10	9	9	8	9	13	16	18	21	22	23	25	25	25	24	24	23	22	20	19	18	19	17.7	24.9	
21-Aug	19	18	18	17	17	16	16	15	17	17	18	19	21	22	22	22	21	19	16	15	14	14	13	13	17.5	22.2	
22-Aug	13	12	12	10	10	8	9	11	14	15	16	17	18	20	20	20	20	20	19	17	14	12	11	10	14.5	20.1	
23-Aug	9	9	9	9	10	10	9	10	10	10	10	10	10	12	14	15	15	15	15	13	11	10	10	10	10.9	15.1	
24-Aug	10	10	10	10	9	8	9	11	13	14	15	16	17	18	18	19	20	20	18	16	14	12	11	11	13.8	19.9	
25-Aug	11	11	11	11	10	9	9	11	14	14	15	16	17	17	18	19	20	20	19	17	14	11	10	9	13.8	20.2	
26-Aug	9	9	9	10	10	9	9	9	9	11	14	16	18	20	20	20	19	19	19	17	16	14	12	11	13.7	20.2	
27-Aug	9	8	7	7	6	5	6	8	11	14	17	19	21	22	23	23	24	24	22	18	16	14	12	11	14.5	24.4	
28-Aug	9	8	7	7	7	6	7	10	15	18	20	22	23	25	26	27	27	27	25	23	21	19	16	14	17.1	27.5	
29-Aug	13	12	11	10	10	9	9	11	15	18	22	24	25	27	28	29	29	29	29	25	23	19	17	16	14	18.6	29.0
30-Aug	13	13	12	10	10	9	9	12	15	18	21	24	26	27	28	28	28	28	27	26	22	18	17	15	14	18.4	28.1
31-Aug	13	12	12	11	11	11	10	12	14	18	20	22	24	25	26	27	26	26	25	23	21	20	18	16	18.4	26.7	
	11.1	10.5	9.9	9.4	8.9	8.4	9.0	11.1	13.7	15.7	17.4	18.5	19.5	20.3	20.7	21.0	21.0	20.7	19.8	18.1	15.9	14.1	12.9	12.0	Diurnal Average		
	18.6	18.1	17.6	17.1	16.6	16.4	15.8	17.2	22.0	24.5	25.7	26.4	26.1	26.8	27.9	28.8	28.9	29.0	25.8	23.8	21.5	19.9	18.6	18.7	Diurnal Maximum		

# Hourly Averages for External Temperature at Valleyview August 2009



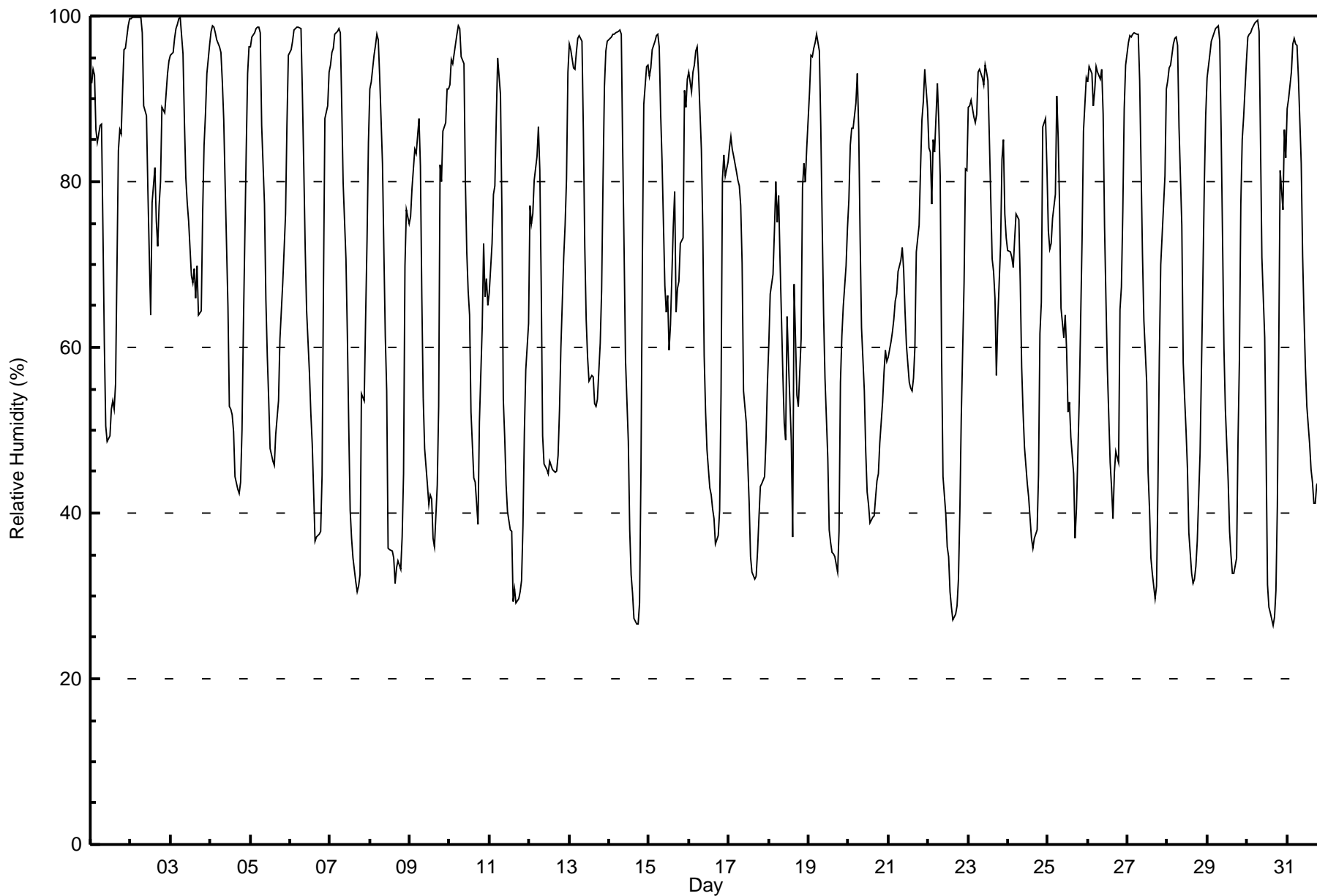
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - Relative Humidity (RH) - %  
August 1, 2009 to September 1, 2009**

Maximum Value: 99.8 % on Aug 2 06:00		Maximum Daily Average: 87.8 % on Aug 2		Hours in Service: 744																							
Minimum Value: 26 % on Aug 30 16:00		Minimum Daily Average: 54.1 % on Aug 11		Hours of Data: 744																							
Maximum Diurnal Average: 92.7 % at hour 6		Minimum Diurnal Average: 43.8 % at hour 16		Hours of Missing Data: 0																							
Monthly Average: 69.37 %		Percentiles: P <sub>1</sub> = 27.9 P <sub>10</sub> = 37.4 Q <sub>1</sub> = 49.3 Median = 71.8 Q <sub>3</sub> = 90.4 P <sub>90</sub> = 97.1 P <sub>99</sub> = 99.8		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	92	94	93	86	85	87	87	74	61	51	49	49	52	54	53	56	84	86	86	91	96	96	99	100	77.4	99.6	
2-Aug	100	100	100	100	100	100	100	98	89	88	79	71	64	77	82	75	72	77	80	89	88	91	93	95	87.8	99.8	
3-Aug	95	96	97	98	99	100	100	96	87	81	77	75	69	68	70	66	70	64	64	76	84	88	93	97	83.7	99.8	
4-Aug	98	99	99	98	97	96	96	92	87	80	65	53	53	52	50	44	43	42	44	50	63	84	93	96	73.8	98.7	
5-Aug	96	97	98	99	99	99	98	87	77	66	59	54	48	46	46	49	52	53	61	68	72	76	87	95	74.2	98.7	
6-Aug	96	97	98	98	99	99	98	90	82	72	64	57	52	48	43	37	37	37	38	45	68	88	89	93	71.9	98.7	
7-Aug	94	96	96	98	98	98	98	89	80	71	62	50	40	37	35	32	31	31	33	54	54	64	73	85	66.5	98.5	
8-Aug	91	92	95	96	98	97	93	82	72	61	55	36	36	35	35	32	33	34	33	37	45	70	77	75	62.9	97.7	
9-Aug	76	79	82	84	83	88	82	66	54	48	43	41	42	42	37	36	43	53	82	80	86	87	91	91	66.5	91.2	
10-Aug	92	95	94	97	98	99	99	95	94	80	72	67	64	52	44	44	41	39	51	62	73	66	68	65	72.9	98.9	
11-Aug	67	73	78	79	88	95	90	77	54	49	43	40	38	38	29	31	29	30	31	32	39	50	57	63	54.1	94.9	
12-Aug	77	75	76	80	83	87	81	68	49	46	45	45	46	46	45	45	45	47	52	60	71	75	80	93	63.2	93.2	
13-Aug	97	96	94	94	96	97	98	97	86	72	63	59	56	57	56	53	53	54	61	67	80	91	96	97	77.9	97.7	
14-Aug	97	97	98	98	98	98	98	98	84	72	58	49	38	33	30	27	27	27	29	45	71	89	94	94	68.7	98.4	
15-Aug	93	94	96	97	98	98	96	88	83	67	64	66	60	63	75	79	64	67	68	73	73	91	89	92	80.5	97.9	
16-Aug	93	91	93	94	96	96	93	84	74	59	52	48	43	42	41	39	36	37	40	54	80	83	81	82	68.1	96.3	
17-Aug	84	85	84	83	81	80	79	77	70	55	51	46	41	35	33	32	32	35	40	43	44	44	49	56	56.7	85.4	
18-Aug	60	67	69	74	80	75	78	71	57	51	49	64	58	49	37	68	61	54	53	61	79	82	80	84	65.0	84.0	
19-Aug	91	95	95	96	97	98	96	87	75	64	56	47	38	36	35	35	35	33	38	56	61	65	70	74	65.5	97.8	
20-Aug	78	84	86	86	89	93	86	73	62	55	47	42	41	39	40	40	42	44	45	48	53	57	60	58	60.4	93.1	
21-Aug	59	61	62	63	66	66	69	71	72	69	64	60	56	55	55	56	60	71	75	82	87	90	94	89	68.8	93.5	
22-Aug	84	84	77	85	84	92	87	81	59	44	40	36	35	31	29	27	28	29	32	40	52	68	82	81	57.7	91.8	
23-Aug	89	89	90	88	87	88	93	94	93	92	94	93	92	85	71	69	66	57	63	72	83	85	76	73	82.6	94.1	
24-Aug	72	72	71	70	73	76	75	68	58	52	48	44	42	39	37	36	37	38	45	62	65	87	88	81	59.7	87.6	
25-Aug	74	72	72	76	79	90	85	77	65	61	64	60	52	53	49	45	37	40	47	54	73	86	89	93	66.4	92.6	
26-Aug	92	94	93	89	91	94	93	92	94	88	75	66	57	46	43	39	45	48	46	65	67	76	89	94	74.0	94.1	
27-Aug	97	98	97	98	98	98	98	92	82	71	63	56	45	41	35	33	30	31	43	59	70	74	81	91	69.9	98.0	
28-Aug	92	94	94	97	97	97	96	87	75	58	54	50	45	38	33	32	32	34	37	47	58	68	80	88	65.9	97.4	
29-Aug	93	95	97	97	98	98	99	97	86	73	60	52	44	38	35	33	33	35	49	59	77	85	88	95	71.5	98.8	
30-Aug	97	98	98	98	99	99	99	98	85	71	61	47	31	29	28	26	27	31	41	60	81	77	86	83	68.8	99.5	
31-Aug	89	90	93	97	97	97	97	93	82	71	64	57	53	48	45	44	41	41	43	44	49	53	61	67	67.3	97.3	
		87.2	88.6	89.2	90.1	91.2	92.7	91.6	85.1	75.0	65.7	59.4	54.2	49.4	46.8	44.3	43.8	44.1	45.1	49.9	59.2	69.1	76.9	81.6	84.5	Diurnal Average	
		99.7	99.8	99.8	99.8	99.8	99.8	99.8	98.1	94.2	91.7	94.1	93.2	92.2	85.2	81.7	78.9	83.8	86.3	85.8	91.1	96.0	96.2	98.8	99.6	Diurnal Maximum	

# Hourly Averages for Relative Humidity at Valleyview

## August 2009



**Peace Airshed Zone Association  
Summary of Hourly Averages**

Valleyview  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

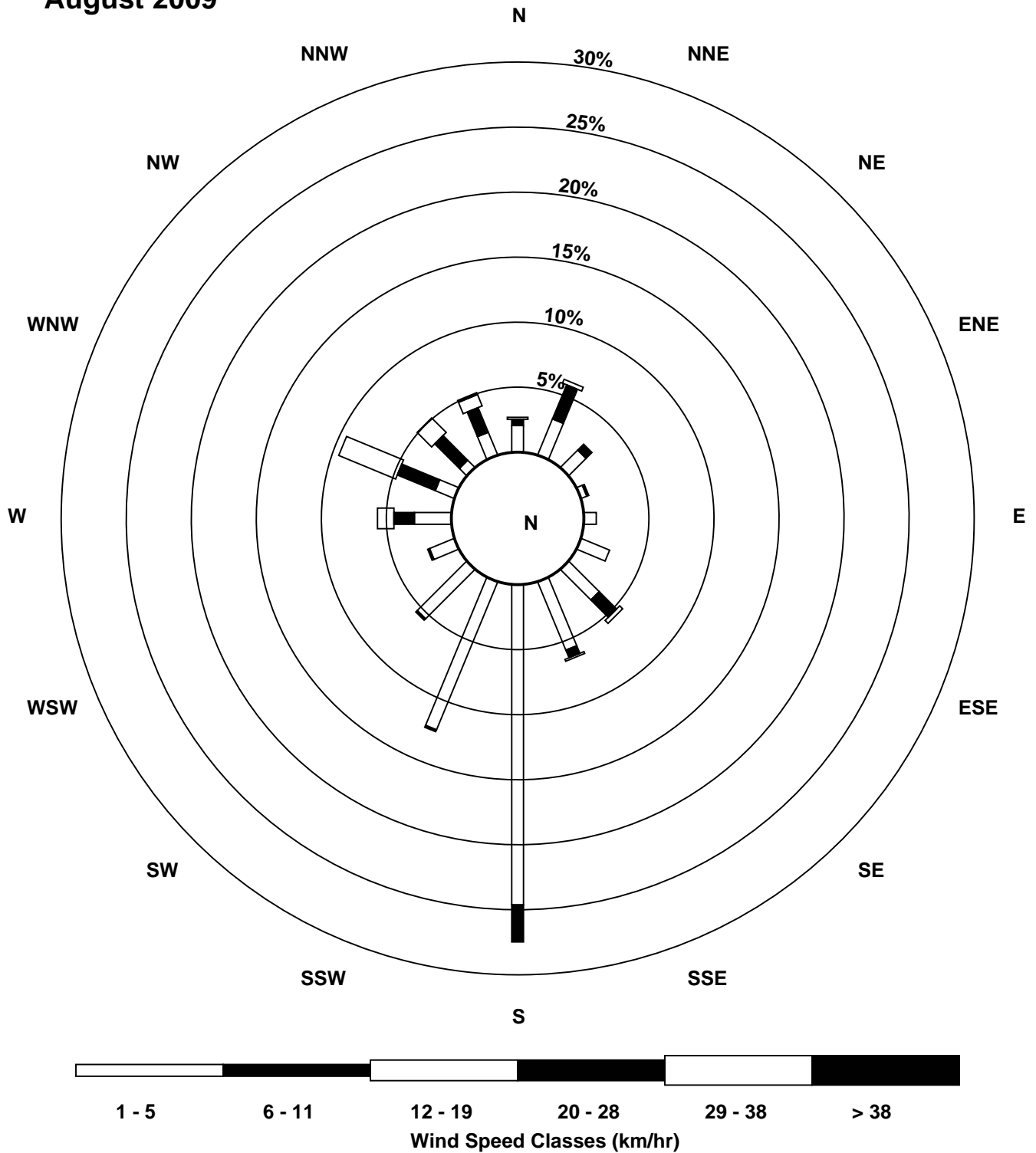
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	1	2	3	2	1	2	2	4	11	7	13	15	14	14	5	3	2	1	2	2	2	1	1	2.8	15.0
Dir	179	293	192	184	199	145	180	175	308	331	298	324	331	303	278	352	337	5	157	179	181	185	172	179	301.1	331.4
2 Spd	1	1	1	1	1	3	3	5	7	1	7	14	3	11	8	8	6	6	7	9	12	2	2	1	3.2	14.0
Dir	187	206	186	181	207	190	189	279	284	125	342	17	29	25	27	37	51	56	30	21	21	44	301	349	18.3	17.0
3 Spd	1	1	2	1	2	2	2	2	4	4	4	3	6	4	6	4	2	3	4	7	7	5	1	0	2.1	7.2
Dir	273	32	7	327	34	16	2	104	139	139	137	116	124	113	77	52	52	47	27	23	21	27	36	83	63.7	23.3
4 Spd	1	2	2	1	1	0	1	2	4	5	6	7	8	8	8	5	6	5	7	4	2	0	1	1	3.0	8.3
Dir	205	184	196	179	335	111	80	37	17	29	34	20	22	31	28	28	17	40	19	31	49	6	187	203	28.9	31.3
5 Spd	1	1	1	0	0	1	0	2	1	1	1	2	3	0	8	5	6	8	6	4	4	4	1	1	2.3	8.3
Dir	203	175	333	258	163	1	327	169	162	133	131	176	135	97	186	187	189	184	172	163	174	181	184	189	176.3	186.4
6 Spd	1	1	0	1	1	1	1	1	3	4	5	4	4	2	4	3	2	4	2	3	1	0	0	2	1.7	4.5
Dir	245	13	36	210	202	283	202	188	170	186	180	187	187	176	131	143	158	154	114	128	165	268	47	157	165.5	179.8
7 Spd	1	1	1	1	1	1	2	3	3	2	2	2	3	3	2	1	2	2	1	1	4	3	1	1	1.5	4.3
Dir	254	228	210	206	194	194	188	190	186	200	183	196	149	168	164	150	180	178	167	133	107	125	112	200	170.8	106.6
8 Spd	0	1	1	2	2	2	4	4	4	4	3	8	12	14	14	15	12	11	11	6	2	2	2	4	4.2	14.9
Dir	93	225	275	191	196	197	191	189	190	191	182	293	291	290	294	296	304	307	305	305	279	187	191	191	277.7	296.0
9 Spd	4	4	4	2	3	2	3	3	8	11	11	7	6	2	3	3	6	5	4	4	2	4	3	4	2.4	11.0
Dir	188	184	186	181	183	130	176	268	304	312	318	292	299	236	284	241	195	215	211	189	181	185	188	175	240.3	318.1
10 Spd	1	3	1	1	1	1	1	1	4	10	9	3	4	10	6	6	3	4	14	5	1	6	3	5	3.1	14.4
Dir	228	154	170	345	355	8	261	256	268	322	336	271	254	268	289	294	238	272	317	324	196	270	196	196	288.0	317.3
11 Spd	4	3	2	2	2	2	3	3	9	11	13	13	13	14	17	13	13	14	12	10	7	3	3	3	6.9	17.3
Dir	201	192	166	166	186	191	180	188	278	287	283	275	267	275	274	277	295	295	288	276	269	230	243	215	270.9	274.3
12 Spd	3	4	4	4	5	3	3	3	13	15	14	15	12	15	13	17	20	16	14	12	7	9	8	7	7.4	19.5
Dir	180	192	195	194	186	170	179	226	281	287	292	303	304	320	324	328	332	330	342	339	311	297	294	353	308.1	332.2
13 Spd	8	3	3	3	1	2	3	3	2	4	4	4	3	2	2	1	2	3	3	2	1	1	0	1	0.9	7.8
Dir	5	359	342	337	219	196	332	0	86	24	18	29	28	123	134	199	72	150	190	191	159	188	120	204	26.1	4.8
14 Spd	0	1	1	1	2	1	1	1	4	3	2	2	3	2	4	2	4	1	2	1	1	1	1	1	0.9	4.0
Dir	189	233	190	218	202	229	202	211	171	176	170	266	251	268	303	305	337	225	303	136	149	175	177	205	233.2	302.7
15 Spd	1	0	1	1	1	1	1	2	3	5	9	8	6	2	2	3	1	3	4	3	3	2	2	2	1.4	8.9
Dir	215	173	188	236	216	222	191	183	191	280	319	319	346	95	254	192	113	328	291	275	265	187	193	176	275.4	319.1
16 Spd	3	3	3	3	3	3	4	4	3	2	4	4	4	6	6	8	6	7	4	2	2	3	3	3	1.8	7.6
Dir	180	184	181	184	172	183	180	183	180	262	266	282	315	340	317	338	284	294	282	203	185	184	187	184	247.6	338.4
17 Spd	3	3	3	4	4	5	5	4	4	7	9	15	17	16	16	16	17	15	13	7	8	9	6	4	7.0	16.9
Dir	176	168	175	177	186	186	187	185	189	258	270	296	289	289	289	300	290	283	282	268	282	278	272	260	272.5	289.2
18 Spd	1	3	3	3	3	3	3	2	14	19	17	11	10	12	18	16	9	8	4	1	1	1	2	1	5.2	18.7
Dir	242	206	207	194	197	230	176	225	301	311	317	329	329	323	338	352	342	348	335	198	220	274	21	341	319.9	311.4
19 Spd	1	2	1	1	0	2	2	2	2	2	2	3	3	3	1	3	3	2	2	1	2	0	1	2	1.4	3.3
Dir	345	204	183	174	243	192	180	158	146	78	161	153	129	172	179	141	109	119	96	156	103	213	221	185	148.5	140.8
20 Spd	1	0	1	1	1	1	1	2	1	6	9	11	13	10	13	12	10	10	10	7	6	4	6	8	5.6	12.9
Dir	285	280	312	291	293	209	232	186	192	145	142	142	136	146	142	146	149	142	143	139	144	154	163	169	148.1	136.4
21 Spd	8	8	8	9	7	5	6	5	6	8	8	5	1	4	5	5	3	5	11	9	6	5	2	2	3.1	10.9
Dir	165	167	171	180	180	191	186	196	265	316	324	305	219	172	177	178	165	267	298	315	181	190	196	172	212.8	297.9
22 Spd	2	3	2	2	2	2	3	2	8	15	16	15	12	13	13	14	10	7	5	1	2	0	3	1	4.9	16.0
Dir	188	204	235	185	221	172	189	177	291	293	302	302	289	276	298	294	322	343	23	24	336	302	183	200	292.9	302.3

**Peace Airshed Zone Association  
Summary of Hourly Averages**

Valleyview  
August 1, 2009 to September 1, 2009  
WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	0	1	3	3	1	3	6	7	5	2	3	5	5	5	6	6	2	4	3	2	3	3	3	3.1	7.1
Dir	177	226	1	249	158	293	198	185	187	195	208	188	187	189	189	179	180	215	181	195	218	208	206	236	193.7	187.0
24 Spd	3	3	3	3	3	4	4	5	11	12	11	12	11	7	8	2	2	3	2	2	1	1	1	0	3.2	12.0
Dir	225	230	214	221	231	242	246	257	289	300	301	299	297	297	313	337	49	104	120	134	117	188	156	77	283.4	299.9
25 Spd	1	4	3	2	2	1	1	2	6	7	4	6	15	14	5	4	6	7	6	1	1	1	2	3	1.7	15.4
Dir	165	156	175	198	201	188	230	216	182	188	196	233	299	324	349	4	309	333	5	219	203	215	186	183	269.0	299.5
26 Spd	0	2	2	1	4	1	2	2	2	2	1	3	2	2	4	7	3	2	1	2	1	1	1	2	1.4	6.9
Dir	109	188	208	149	190	82	144	149	127	163	126	8	350	190	184	183	187	123	293	199	221	167	195	187	177.1	183.1
27 Spd	1	2	2	2	2	1	1	2	3	3	3	3	2	1	2	3	2	2	2	2	0	1	0	0	1.4	3.1
Dir	152	190	209	186	203	179	199	185	180	187	184	171	172	198	193	147	156	110	95	103	129	317	47	153	170.6	146.6
28 Spd	1	1	1	1	1	1	0	0	3	7	5	5	5	4	4	5	6	6	6	4	2	2	1	0	2.7	7.0
Dir	222	218	224	196	193	202	256	161	193	188	186	189	193	191	187	163	151	137	136	143	177	191	354	247	175.4	187.8
29 Spd	1	1	1	1	1	1	1	1	2	4	5	4	5	5	3	2	3	1	8	2	2	1	0	2	1.4	7.7
Dir	218	267	201	263	221	201	345	194	188	193	195	196	196	193	203	209	153	274	343	32	179	229	155	166	205.3	343.2
30 Spd	1	1	1	1	2	2	1	1	3	2	3	2	1	6	2	2	2	3	1	1	0	0	1	0	1.1	5.9
Dir	314	215	188	216	201	194	196	176	180	188	161	196	290	281	249	264	153	134	97	135	285	34	211	190	202.8	281.4
31 Spd	1	1	1	1	3	2	3	2	3	2	2	2	2	2	3	4	8	8	6	7	8	6	4	5	1.7	8.0
Dir	225	215	206	203	256	182	188	229	173	172	180	169	92	79	54	47	31	24	22	17	17	23	27	13	33.4	23.8
Spd	1.1	1.5	1.4	1.6	1.7	1.4	1.6	1.8	2.5	3.1	3.2	3.5	3.2	3.3	3.1	2.1	1.8	1.6	2.2	0.7	0.3	1.0	1.0	1.3	Diurnal Average	
Dir	196.7	190.4	194.5	197.2	196.4	193.8	193.5	201.1	249.6	279.1	291.0	296.8	293.0	291.3	292.7	303.2	309.3	314.0	324.8	324.4	249.8	226.9	215.1	193.9	Diurnal Maximum	
Spd	7.8	7.6	8.4	8.9	6.6	5.4	5.7	6.2	14.0	18.7	16.7	15.5	16.9	15.5	18.5	16.7	19.5	15.7	14.4	12.4	11.8	9.2	8.0	8.4	Diurnal Maximum	
Dir	4.8	167.1	170.7	179.8	180.2	186.0	186.2	185.2	300.8	311.4	316.7	295.9	289.2	289.0	337.8	327.6	332.2	330.5	317.3	339.3	21.4	277.9	294.3	169.1	Diurnal Maximum	
Maximum Speed Value: 20 km/h on Aug 12 17:00																		Minimum Speed Value: 0 km/h on Aug 22 22:00						Hours in Service: 744		
Maximum Daily Speed Average: 7.4 km/h on Aug 12																		Minimum Daily Speed Average: 0.9 km/h on Aug 14						Hours of Data: 744		
Maximum Diurnal Speed Average: 3.5 km/h at hour 12																		Minimum Diurnal Speed Average: 0.3 km/h at hour 21						Hours of Missing Data: 0		
Monthly Average Velocity: 1.31 km/h 264.90 deg																		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.4 Median = 2.8 Q <sub>3</sub> = 5.4 P <sub>90</sub> = 10.5 P <sub>99</sub> = 16.7						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Direction	Speed Range (km/h)							Total																		
	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38																				
North	26	22	6	0	0	0	54																			
NorthEast	28	15	0	0	0	0	43																			
East	25	1	0	0	0	0	26																			
SouthEast	59	12	4	0	0	0	75																			
South	244	33	0	0	0	0	277																			
SouthWest	89	2	0	0	0	0	91																			
West	43	21	22	0	0	0	86																			
NorthWest	26	33	32	1	0	0	92																			
Total	540	139	64	1	0	0	744																			

# Wind Rose for WS at Valleyview August 2009





**Peace Airshed Zone Association**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Valleyview - Wind Speed (WS) - km/h**  
**August 1, 2009 to September 1, 2009**

Maximum Speed: 20 km/h on Aug 12 17:00	Maximum Daily Speed Average: 10.2 km/h on Aug 12	Hours in Service: 744
Minimum Speed: 1 km/h on Aug 7 06:00	Minimum Daily Speed Average: 2.2 km/h on Aug 30	Hours of Data: 744
Maximum Diurnal Speed Average: 8.0 km/h at hour 15	Minimum Diurnal Speed Average: 2.2 km/h at hour 6	Hours of Missing Data: 0
Monthly Average Speed: 4.67 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 2.0 Median = 3.2 Q <sub>3</sub> = 5.9 P <sub>90</sub> = 10.8 P <sub>99</sub> = 17.2	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	1	2	3	3	2	2	2	6	11	8	14	15	15	14	8	7	3	2	2	2	2	1	2	5.5	15.4
2-Aug	1	2	1	1	1	3	3	7	9	4	7	15	4	11	9	9	7	6	7	10	12	3	2	2	5.7	14.5
3-Aug	1	2	3	3	2	3	2	3	4	4	4	3	7	5	6	5	3	4	4	7	7	5	2	1	3.7	7.3
4-Aug	1	2	2	1	1	1	1	3	5	5	7	8	9	10	9	6	7	6	7	4	2	1	1	1	4.1	9.7
5-Aug	1	1	2	2	1	1	1	2	2	2	3	3	4	3	8	6	6	8	6	4	4	4	1	1	3.2	8.4
6-Aug	1	1	2	1	1	1	2	2	3	4	5	5	4	4	4	3	4	3	3	1	1	1	1	2	2.6	4.9
7-Aug	2	1	1	1	1	1	2	3	3	3	3	3	4	4	4	3	3	3	1	2	4	3	1	2	2.3	4.3
8-Aug	1	1	1	2	2	3	4	4	4	4	3	8	13	14	15	15	13	11	11	6	3	2	2	4	6.1	15.4
9-Aug	4	4	4	2	3	3	3	5	8	11	12	7	6	3	6	4	6	6	4	4	2	4	3	5	5.0	11.7
10-Aug	3	3	2	1	2	1	3	2	5	11	9	4	5	10	7	7	4	5	15	7	2	6	4	5	5.1	15.3
11-Aug	4	3	2	3	2	2	3	4	10	12	14	14	13	15	18	14	14	14	12	10	7	3	3	4	8.3	18.1
12-Aug	3	4	4	4	5	3	3	4	13	16	15	15	12	16	14	17	20	16	15	13	7	9	8	8	10.2	19.9
13-Aug	8	3	3	3	1	2	3	4	3	5	5	5	4	3	3	2	3	4	3	2	2	1	2	1	3.0	8.0
14-Aug	1	2	1	1	2	1	1	2	4	4	3	4	4	4	5	4	5	3	3	1	1	1	1	1	2.5	5.4
15-Aug	1	1	1	2	1	1	1	2	3	6	10	9	7	4	5	4	5	7	4	3	3	3	2	2	3.7	9.6
16-Aug	3	3	3	3	3	3	4	4	3	4	5	5	6	7	7	8	7	8	4	2	2	3	3	3	4.3	8.1
17-Aug	3	3	3	4	4	5	5	4	4	8	9	16	17	16	16	16	17	15	13	7	9	9	6	4	8.9	17.2
18-Aug	2	3	3	3	3	3	3	3	14	19	17	12	11	13	19	16	9	9	4	2	2	2	3	1	7.3	19.4
19-Aug	1	2	1	2	1	2	2	3	2	3	3	4	4	4	3	4	4	3	3	2	2	1	2	2	2.4	4.5
20-Aug	2	1	1	1	1	1	1	2	2	6	10	12	13	10	13	12	10	10	11	7	6	5	6	9	6.3	13.2
21-Aug	8	8	9	9	7	5	6	5	7	9	8	6	3	5	5	4	7	12	10	6	5	2	2	2	6.5	11.9
22-Aug	3	3	3	2	2	3	3	3	9	15	16	16	13	13	14	14	11	8	5	2	2	1	3	1	6.8	16.4
23-Aug	1	1	2	4	6	2	3	6	7	5	3	3	5	5	5	7	6	3	4	3	3	3	3	3	3.9	7.1
24-Aug	3	3	3	3	3	4	4	6	11	12	12	12	11	8	9	4	4	3	3	2	1	1	1	2	5.2	12.4
25-Aug	3	4	4	3	3	1	1	3	6	7	4	7	16	15	7	5	7	8	6	2	2	2	2	3	5.1	15.7
26-Aug	1	2	3	3	5	2	2	2	3	2	3	3	3	2	4	7	3	2	2	3	3	2	1	2	2.7	7.1
27-Aug	2	2	2	3	2	1	1	2	3	3	3	4	3	2	4	4	2	3	2	2	2	1	2	1	2.3	3.8
28-Aug	1	1	2	1	1	1	1	1	3	7	5	5	5	5	4	4	5	6	6	6	4	2	2	1	3.3	7.1
29-Aug	1	1	1	1	1	1	2	2	2	4	5	4	5	5	4	3	3	3	8	3	2	2	2	2	2.7	7.8
30-Aug	1	2	1	2	2	2	1	1	3	3	3	3	4	6	3	3	3	3	2	1	1	1	1	1	2.2	6.4
31-Aug	2	1	1	1	3	3	3	2	3	2	3	2	3	3	4	5	8	8	6	7	8	6	4	5	3.9	8.1

2.3	2.3	2.3	2.4	2.4	2.2	2.5	3.1	5.2	6.8	7.0	7.4	7.5	7.7	8.0	7.2	6.7	6.4	6.0	4.5	3.7	3.0	2.5	2.7	Diurnal Average	
8.0	7.7	8.6	8.9	6.7	5.4	5.8	6.5	14.3	19.0	17.3	15.8	17.2	16.1	19.4	17.3	19.9	16.3	15.3	12.5	11.9	9.3	8.1	8.5	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Peace Airshed Zone Association  
Summary of Hourly Standard Deviations**

**Valleyview - Wind Direction (WD) - deg  
August 1, 2009 to September 1, 2009**

Maximum Value: 99.8 deg on Aug 22 22:00																								Hours in Service:	744
Minimum Value: 4.8 deg on Sep 1 00:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 6.1 P <sub>10</sub> = 10.9 Q <sub>1</sub> = 15.3 Median = 28.6 Q <sub>3</sub> = 51.2 P <sub>90</sub> = 73.2 P <sub>99</sub> = 92.0																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	38	75	17	11	12	72	29	27	80	17	28	21	14	26	11	51	85	73	66	15	17	19	20	35	84.7
2-Aug	11	19	17	27	51	15	27	48	59	78	22	16	90	12	19	20	25	24	18	18	8	51	41	74	90.3
3-Aug	73	46	51	70	52	65	33	48	35	16	27	28	19	31	26	31	50	36	19	9	9	23	47	87	86.7
4-Aug	46	12	19	41	78	75	74	51	34	39	24	34	26	36	25	34	29	32	13	13	25	91	63	55	91.1
5-Aug	80	79	69	97	79	51	64	57	64	95	88	67	41	92	14	17	16	16	14	12	13	9	42	22	97.1
6-Aug	57	80	80	50	41	56	81	58	35	22	23	34	37	60	38	33	45	29	36	14	68	74	93	41	93.0
7-Aug	52	40	42	32	57	41	24	12	21	42	42	62	56	67	81	76	52	47	61	43	13	34	59	32	80.7
8-Aug	80	34	51	16	15	11	7	9	11	16	24	29	17	16	17	15	17	17	11	11	41	9	19	10	80.5
9-Aug	6	9	7	30	17	49	26	58	16	16	20	33	29	66	62	53	19	22	25	9	15	10	17	18	66.4
10-Aug	68	13	71	67	72	51	81	83	37	17	16	43	41	20	41	33	56	40	27	86	59	29	24	13	85.8
11-Aug	20	17	23	36	39	27	24	32	25	13	13	14	18	16	18	14	20	13	12	8	6	27	25	33	39.0
12-Aug	14	7	7	7	6	11	11	41	13	15	19	15	19	25	16	15	10	15	10	7	24	10	10	30	40.8
13-Aug	13	28	24	17	41	11	51	44	47	42	43	41	50	69	73	64	57	22	7	23	44	79	77	81	81.5
14-Aug	88	55	59	41	23	38	30	45	17	33	59	77	62	69	62	78	81	83	53	41	83	61	77	25	88.0
15-Aug	42	90	32	64	46	40	42	23	13	52	23	22	29	69	62	27	83	88	36	29	27	14	14	13	89.9
16-Aug	14	7	6	6	9	6	8	10	17	63	50	50	59	36	29	27	26	30	23	22	8	10	9	9	62.5
17-Aug	10	9	7	10	6	8	6	11	11	32	16	12	12	13	13	13	14	11	10	13	12	9	13	21	31.8
18-Aug	34	10	15	7	14	37	30	39	12	11	14	24	20	15	19	11	9	11	18	78	32	76	66	74	77.5
19-Aug	76	40	54	64	85	10	21	17	40	49	76	44	43	41	78	46	39	61	35	34	41	77	83	36	85.1
20-Aug	78	74	55	21	57	61	66	22	49	18	14	13	11	16	11	13	13	11	10	9	9	11	13	11	77.9
21-Aug	12	12	13	8	12	15	9	14	38	23	18	44	82	26	15	13	17	49	25	37	19	29	19	32	82.3
22-Aug	36	18	45	50	34	61	12	25	24	11	13	15	21	17	19	17	16	31	13	27	35	100	35	68	99.8
23-Aug	58	93	81	43	57	78	28	18	7	31	31	26	11	14	20	12	16	38	14	15	31	13	12	20	93.0
24-Aug	22	22	16	18	16	15	14	14	16	14	25	20	22	27	37	71	52	33	21	37	46	67	74	80	80.2
25-Aug	75	13	11	31	20	34	66	34	14	10	21	36	12	17	56	52	44	27	30	47	57	54	27	33	75.2
26-Aug	90	35	35	70	35	83	47	48	65	33	90	48	75	54	25	15	15	27	94	30	68	95	65	26	95.0
27-Aug	72	32	39	20	43	72	43	14	19	25	36	35	54	71	80	50	54	30	30	39	81	51	91	82	91.1
28-Aug	51	62	28	16	27	32	78	90	28	10	12	16	12	17	19	21	19	10	6	9	13	23	24	55	90.3
29-Aug	36	66	37	53	25	62	61	39	33	10	13	13	9	15	14	25	24	67	12	35	36	28	86	32	86.4
30-Aug	73	41	20	40	17	15	12	14	13	18	24	42	92	35	66	65	67	18	28	40	66	85	43	95	94.5
31-Aug	46	57	18	23	43	31	22	45	16	42	34	41	61	67	61	31	13	8	6	5	6	7	6	5	67.4
90.0	93.0	80.8	97.1	85.1	82.9	81.0	90.3	80.4	95.2	89.8	77.2	92.1	92.2	80.7	78.3	84.7	88.4	94.1	85.8	83.3	99.8	93.0	94.5		

# PASZA

## Monthly Passive Data Summary

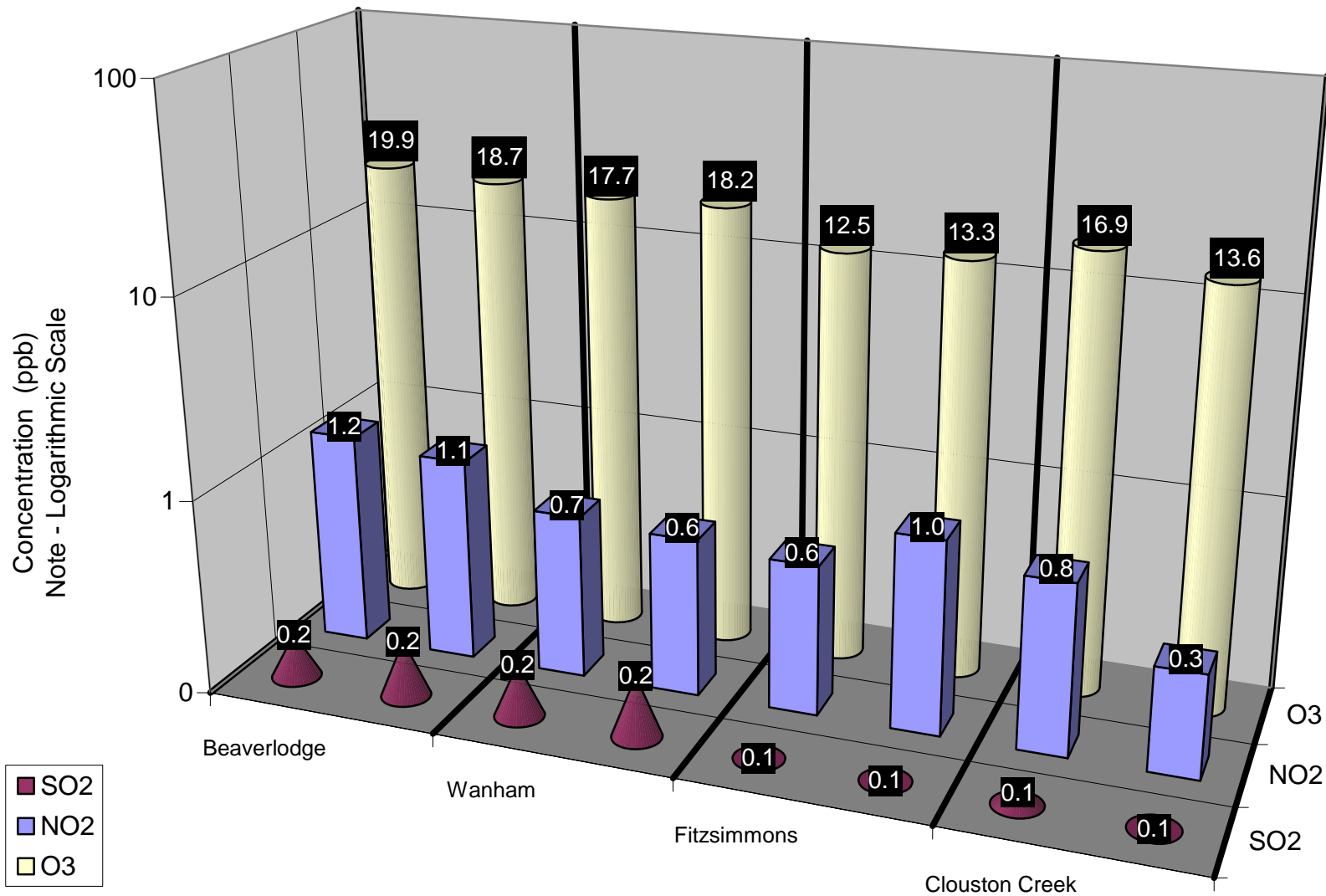
## PASZA Passive Results for August 2009

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
<b>Duplicates</b>					
16a	Beaverlodge	0.2	19.9	1.2	
16b	Beaverlodge	0.2	18.7	1.1	
19a	Wanham	0.2	17.7	0.7	
19b	Wanham	0.2	18.2	0.6	
30a	Fitzsimmons	0.1	12.5	0.6	
30b	Fitzsimmons	0.1	13.3	1.0	
39a	Clouston Creek	0.1	16.9	0.8	
39b	Clouston Creek	0.1	13.6	0.3	
1	Silver Valley	0.1	14.8	1.1	08-27-081-11 W6M
2	Bay Tree	0.1	16.2	0.6	13-16-078-13 W6M
3	Forth Creek	0.1	20.0	0.7	04-13-082-07 W6M
4	Gordondale	0.2	18.0	0.7	04-34-078-10 W6M
5	Boone Creek	0.1	14.6	0.8	01-23-076-11 W6M
7	Steeprock Creek	0.1	16.7	0.7	09-35-072-13 W6M
9	Spirit River	0.2	16.9	1.5	08-12-079-07 W6M
10	Woking	0.2	16.5	0.9	01-13-076-07 W6M
11	Webber Creek	0.1	16.1	0.8	09-36-074-09 W6M
12	Hythe	0.1	16.2	1.0	14-36-072-11 W6M
14	Sylvester	0.1	12.2	0.7	08-06-069-12 W6M
16	Beaverlodge	0.2	19.3	1.2	15-36-071-10 W6M
17	Poplar	0.1	13.8	0.8	13-06-073-08 W6M
18	Saddle Hills	0.1	18.0	0.9	04-25-074-07 W6M
19	Wanham	0.2	18.0	0.7	16-22-077-03 W6M
20	Shaftesbury	0.1	17.6	0.6	04-03-082-23 W5M
21	Eaglesham	0.1	13.2	0.6	16-21-079-25 W5M
23	Bear Lake	0.1	15.4	1.1	15-31-072-06 W6M

## PASZA Passive Results for August 2009 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	0.1	13.0	1.4	12-31-070-08 W6M
25	Pinto Creek	0.1	14.5	0.7	04-24-069-11 W6M
26	Flyingshot	0.1	14.2	0.8	15-36-070-07 W6M
27	Grande Prairie I	0.1	15.4	2.1	08-15-071-06 W6M
28	Clairmont Lake	0.1	17.3	0.9	09-06-073-04 W6M
29	Smoky Heights	0.1	17.9	1.2	04-06-075-02 W6M
30	Fitzsimmons	0.1	12.9	0.8	15-36-072-03 W6M
32	Gold Creek	0.2	11.7	1.0	06-33-067-05 W6M
33	Wapiti	0.1	13.2	1.0	02-25-071-03 W6M
34	Puskwaskau	0.1	13.4	0.3	15-35-074-25 W5M
35	Jean Cote	0.2	17.2	1.3	12-35-079-21 W5M
36	Guy	0.1	17.4	1.2	03-04-076-22 W5M
37	Crooked Creek	0.1	19.1	1.1	16-01-071-26 W5M
38	Karr Creek	0.1	9.5	0.4	10-16-065-02 W6M
39	Clouston Creek	0.1	15.3	0.5	12-01-073-22 W5M
40	McLennan	0.2	17.1	1.0	03-29-077-19 W5M
41	Valleyview	0.1	15.9	0.7	09-30-069-22 W5M
42	Sunset House	0.1	19.0	0.4	05-32-070-19 W5M
43	High Prairie	0.1	13.4	0.6	16-13-074-17 W5M
44	Peavine	0.1	12.7	0.3	03-05-079-15 W5M
45	Gift Lake	0.1	12.2	0.4	10-07-079-12 W5M
46	Little Smoky	0.1	11.2	0.9	12-01-065-21 W5M
47	Kinuso	0.1	11.2	0.4	12-10-073-10 W5M
48	Deer Mountain	0.1	12.2	0.4	15-22-068-09 W5M
49	Grande Prairie HP	0.1	18.0	2.2	17-26-071-06 W6M

\*BDL = Below Detection Level



Duplicate Summary Chart

## Passive Summary for August 2009

Stats	Sulphur Dioxide SO <sub>2</sub>	Ozone O <sub>3</sub>	Nitrogen Dioxide NO <sub>2</sub>
	ppb	ppb	ppb

Passive Summary for August 2009 (PASZA Zone)			
Mean	0.1	15.3	0.9
Standard Deviation	0.0	2.6	0.4
Minimum	0.1	9.5	0.3
Minimum At	Sylvester (#14)	Karr Creek (#38)	Peavine (#44)
Maximum	0.2	20.0	2.2
Maximum At	McLennan (#40)	Forth Creek (#3)	Grande Prairie HP (#49)

### Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

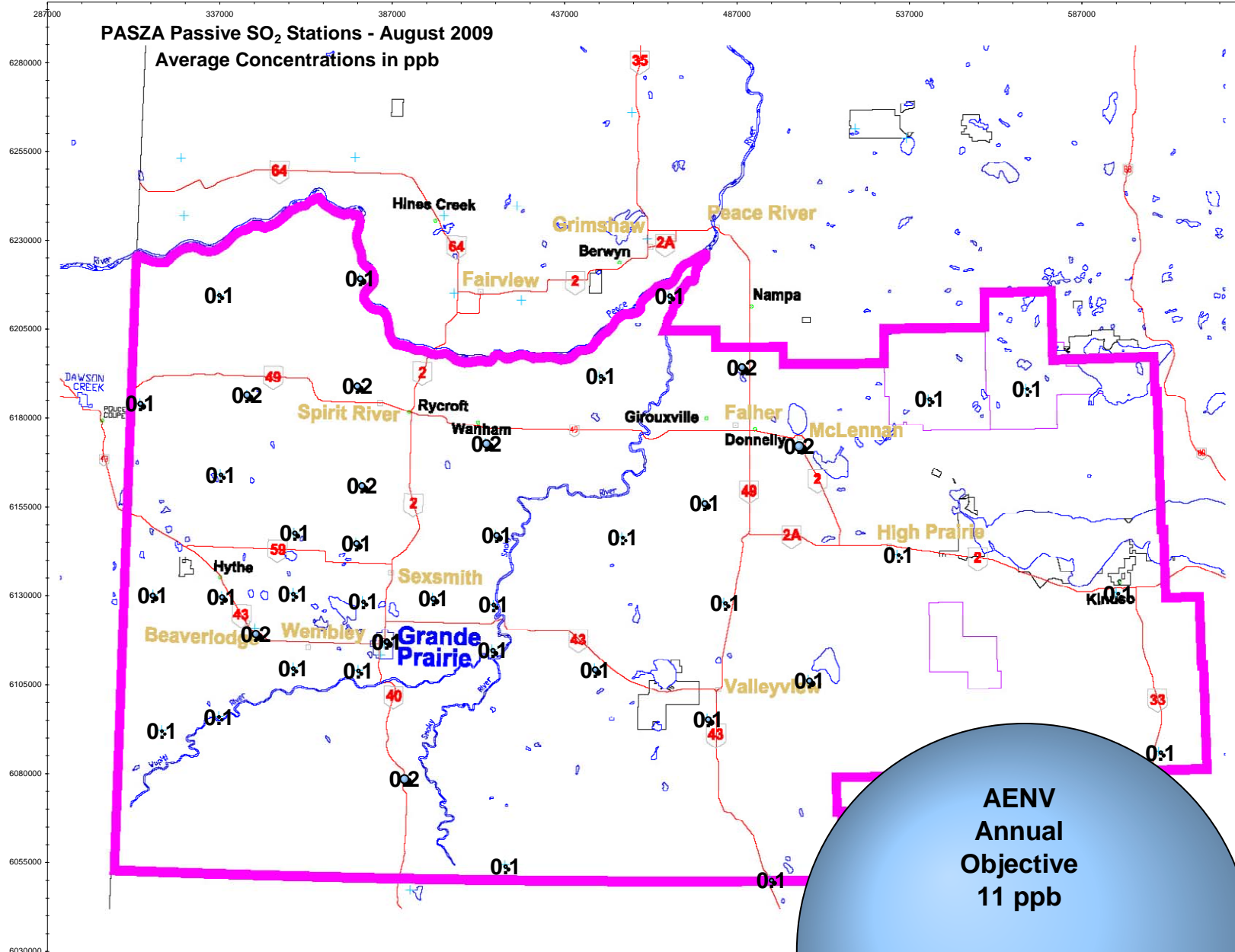
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Beaverlodge station	0.4	25.2	2.4
PASZA Beaverlodge passive	0.2	19.3	1.2

### Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Henry Pirker station	0.2	23.1	4.6
PASZA Grande Prairie passive	0.1	18.0	2.2

### Comparison between Continuous and Passive monitoring at Kinuso (passive #47 Kinuso)

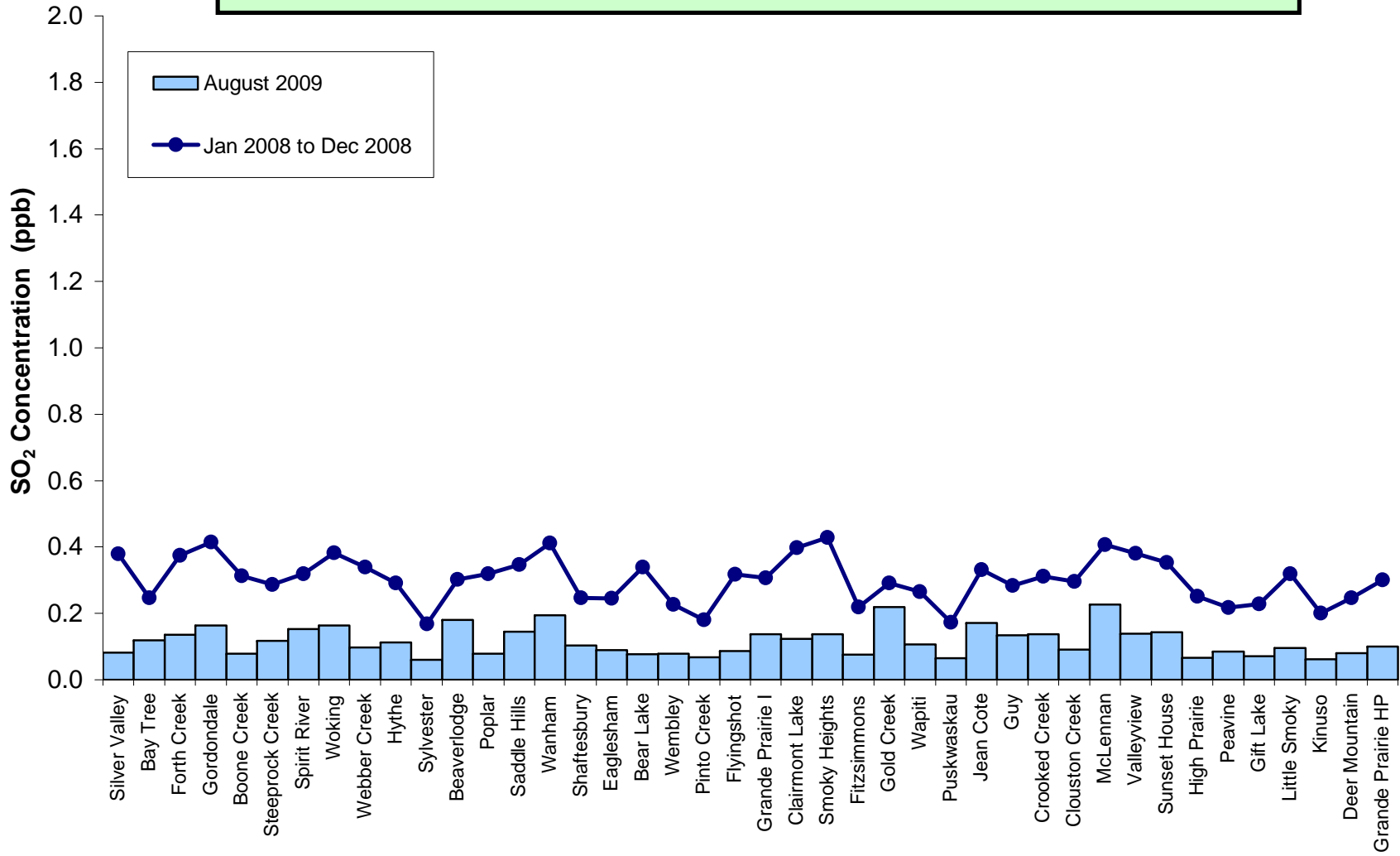
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Portable Kinuso station	0.2	22.6	2.1
PASZA Kinuso passive	0.1	11.2	0.4



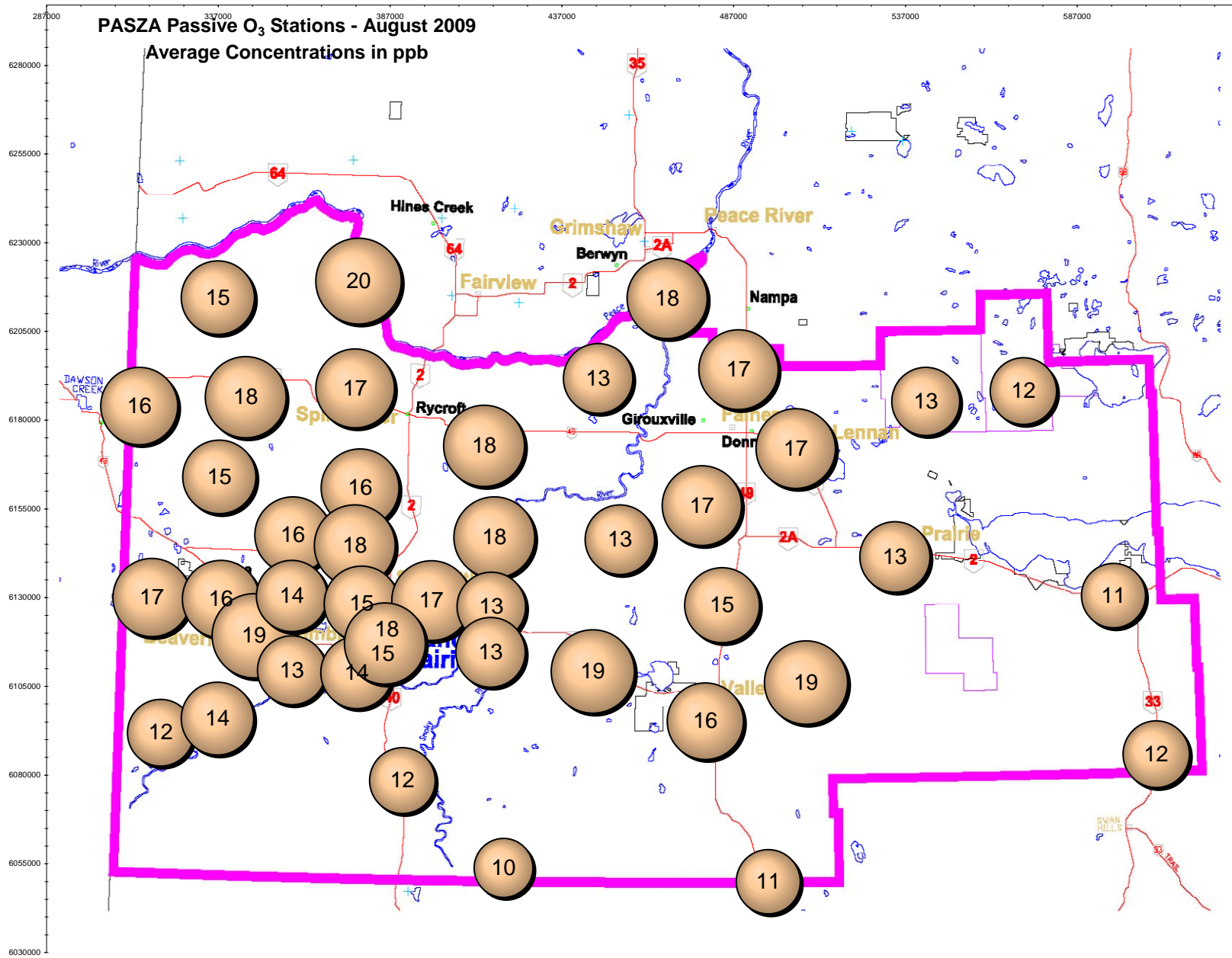
**SO<sub>2</sub> Bubble Chart**



**Alberta Ambient Air Quality Objective - Annual SO<sub>2</sub> Objective is 11 ppb**

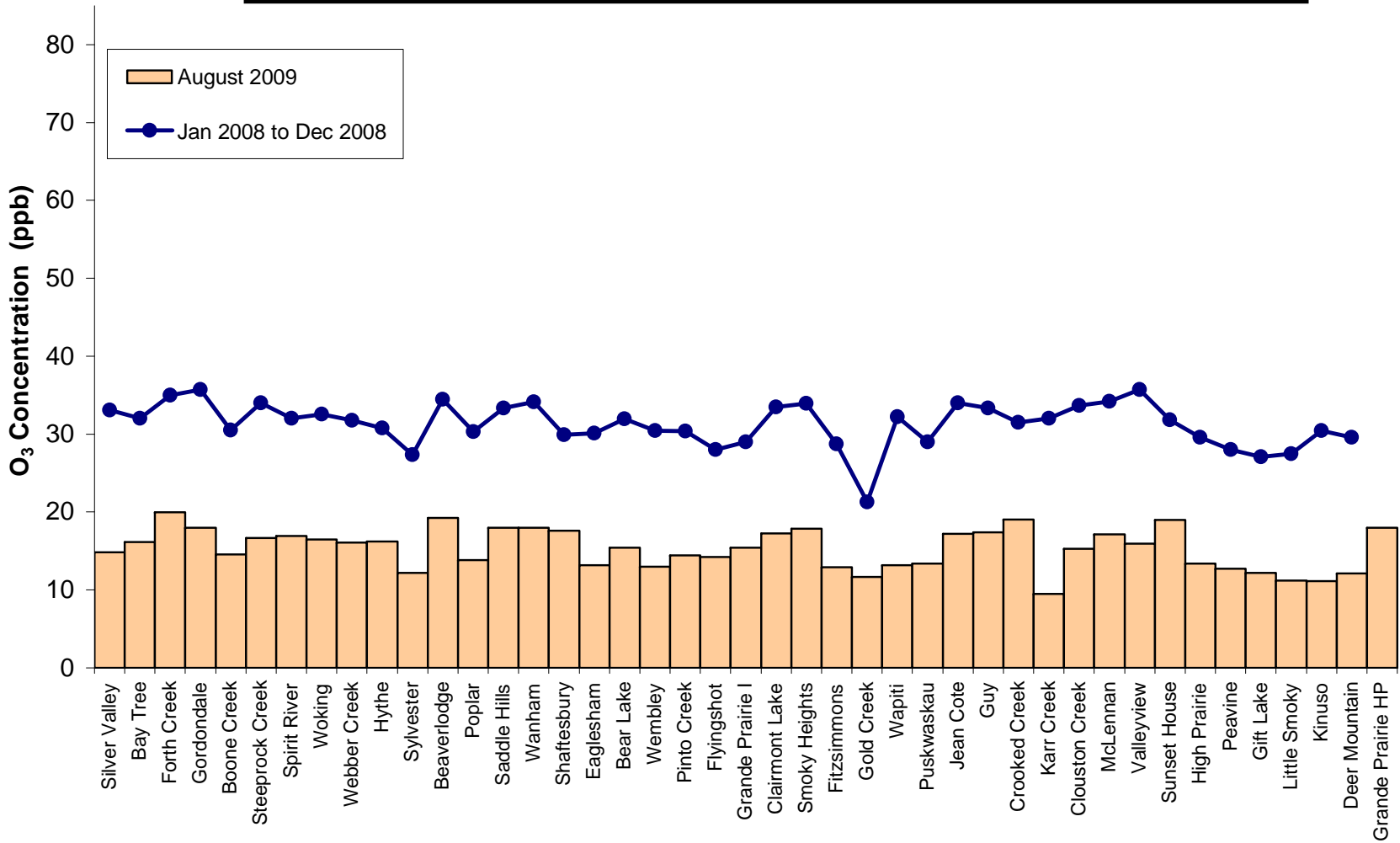


**SO<sub>2</sub> Summary Chart**



**O<sub>3</sub> Bubble Chart**

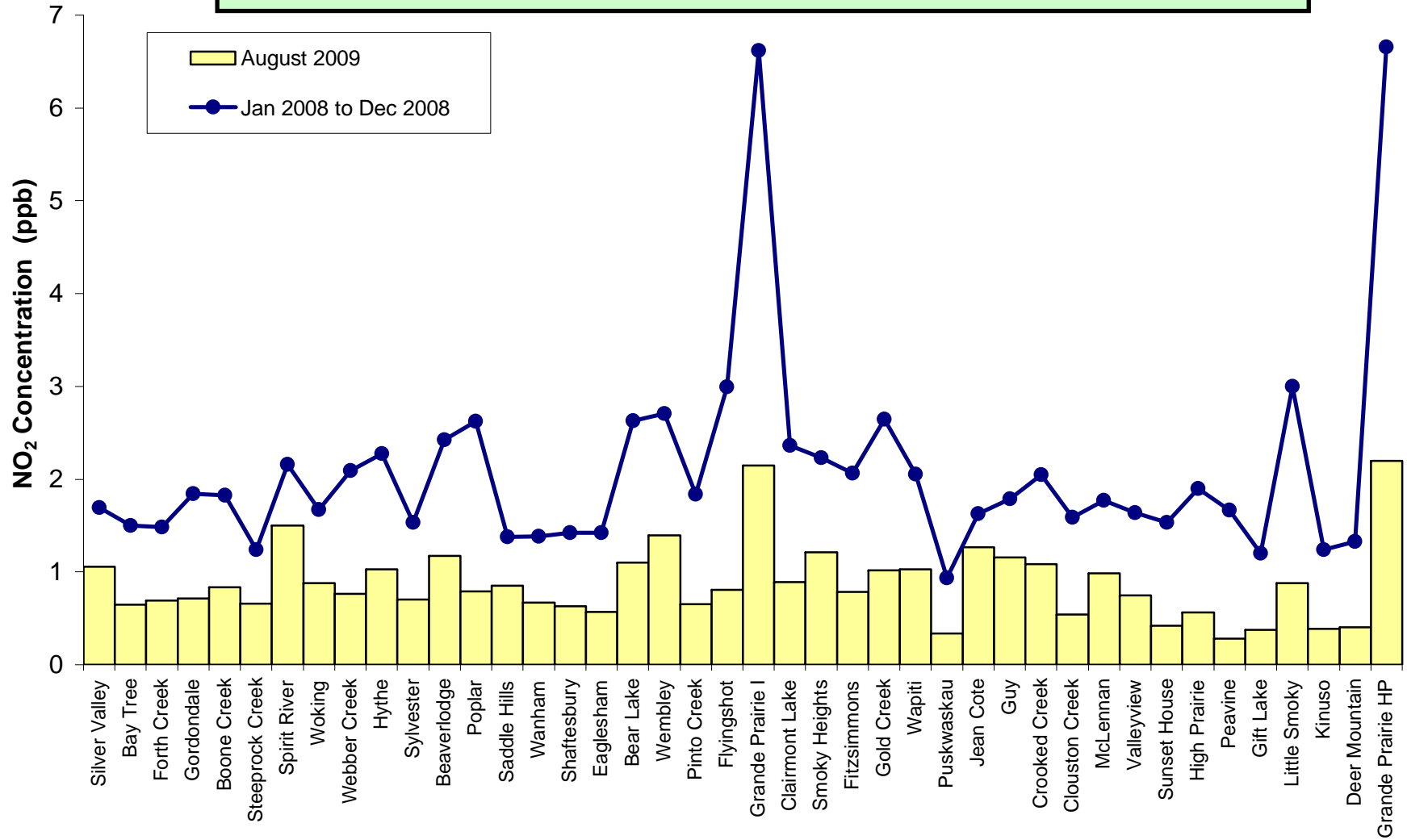
**Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective**



**O<sub>3</sub> Summary Chart**



**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 32 ppb**



**NO<sub>2</sub> Summary Chart**

# August 2009 Calibration Reports

**PASZA - Henry Pirker Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, THC, TRS**

**PASZA – Evergreen Park Station with the following calibrations:  
SO<sub>2</sub>, TRS**

**PASZA – Smoky Heights Station with the following calibrations:  
SO<sub>2</sub>, TRS**

**PASZA – Beaverlodge Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>**

**PASZA – Kinuso (Portable) Station with the following calibrations:  
SO<sub>2</sub>, TRS, NO, NO<sub>2</sub>, NO<sub>x</sub> & O<sub>3</sub>,**

**PASZA – Valleyview Station with the following calibrations:  
SO<sub>2</sub> & H<sub>2</sub>S**

# Calibration Report

Parameter SO2  
 Air Monitoring Network \_\_\_\_\_

**PASZA**



## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	7:10	End Time (MST)	11:00
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	<u>Before</u>		<u>After</u>
Calculated slope	1.004815	Calculated slope	1.004824
Calculated intercept	-1.473407	Calculated intercept	-1.569079
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.4		8.6	
Coefficient	.843		.843	
Pressure	650.7	mm Hg	648.9	mm Hg
Flow	0.504	lpm	0.504	lpm
Lamp Voltage	44097	Hz	44097	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.6	N/A
4991	39.85	400.8	400.0	1.0020
4991	19.91	201.1	202.0	0.9954
4991	9.95	100.7	102.8	0.9790
4989	0.00	0.0	0.0	As Found Zero
4991	39.85	400.8	395.8	As Found Span
Average Correction Factor				0.9921

Calculated value of As Found Response: 396.3 ppb      Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	315.6	ppb	311.0	ppb

Notes:

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Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



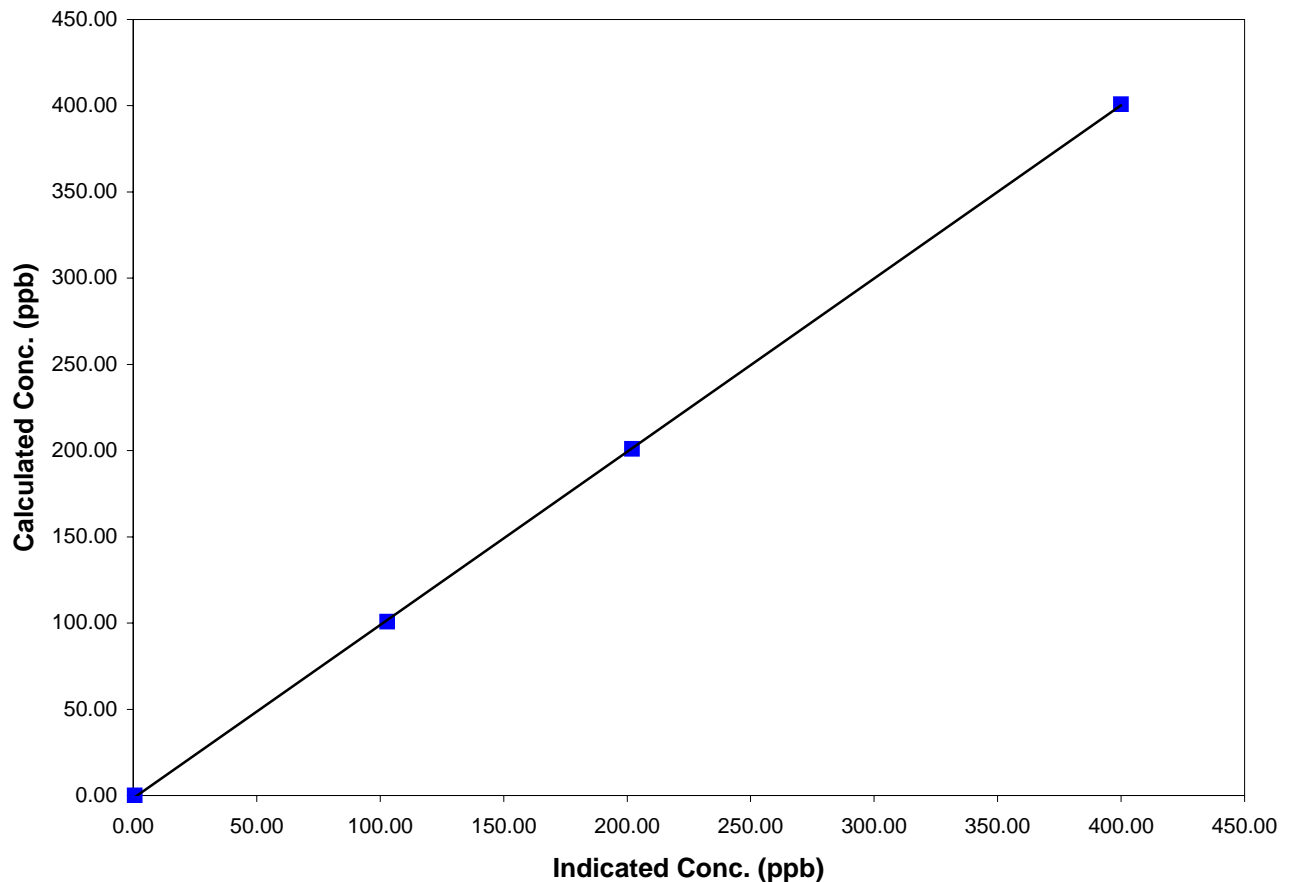
## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:10	End Time (MST)	11:00
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

## Calibration Data

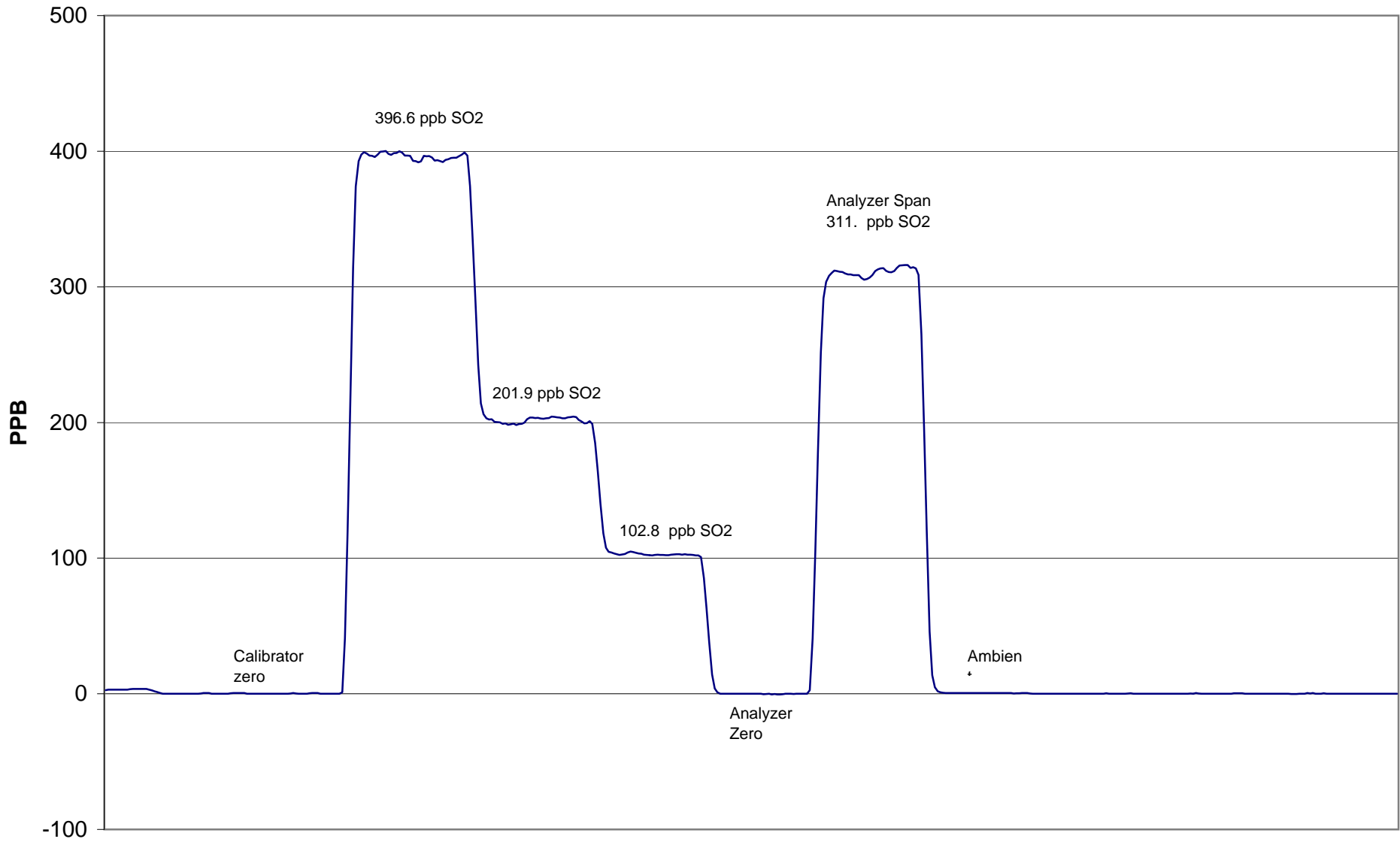
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
400.8	400.0	1.0020	Correlation Coefficient	0.999972
201.1	202.0	0.9954		
100.7	102.8	0.9790	Slope	1.004824
			Intercept	-1.569079

## SO2 Calibration Curve





# Henry Pirker SO<sub>2</sub> Calibration

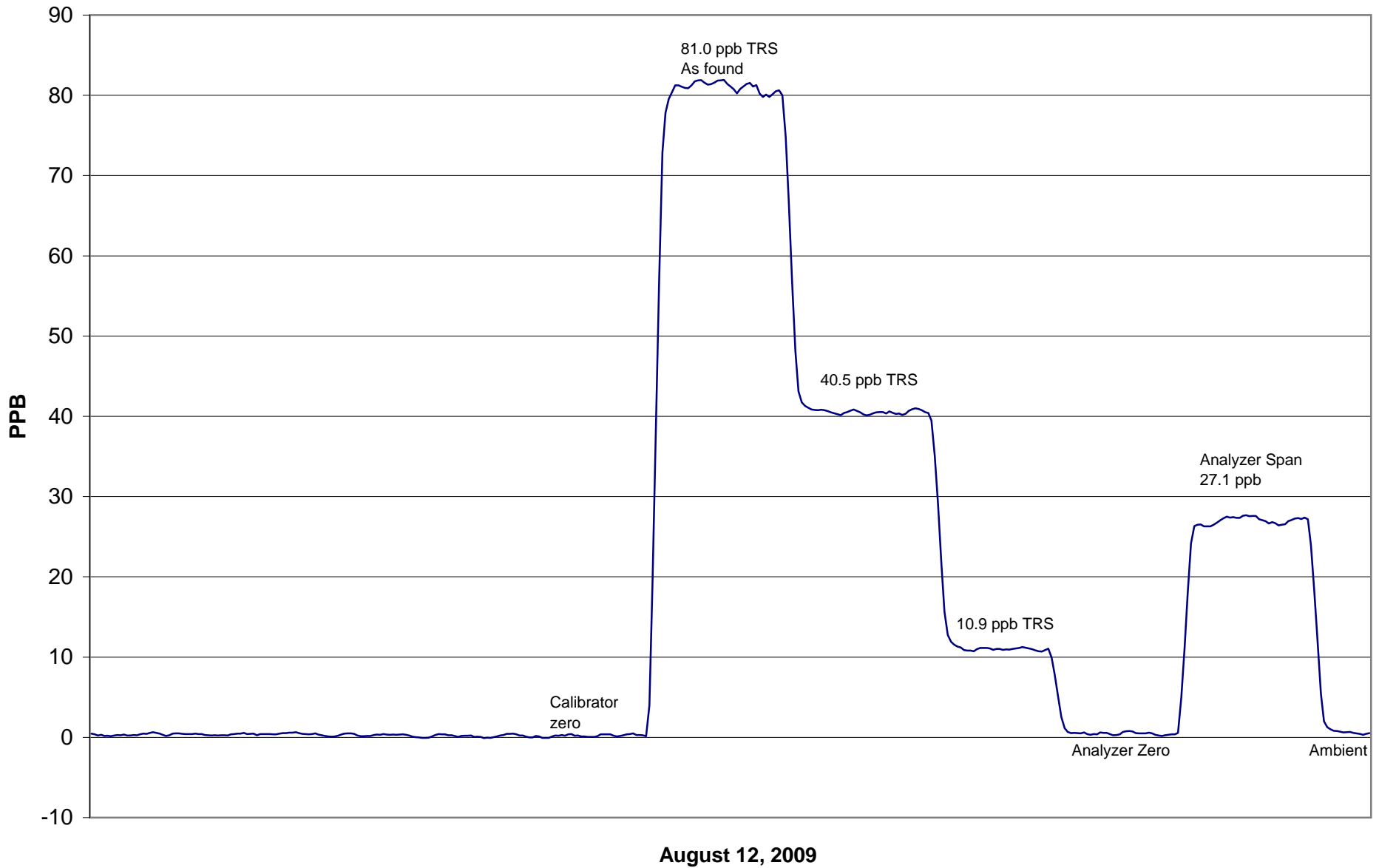


August 11, 2009





# Henry Pirker TRS Calibration



# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	7:10	End Time (MST)	11:33
Barometric Pressure	0.938	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #
			AAL 15377

## DACS Information

DACS make Focus AP1000 DACS serial No. \_\_\_\_\_

Parameter		NO2	NOx	NO
Before	Data Slope	0.993599	1.004722	1.004855
	Data Offset	-0.621402	-2.739205	-2.459801
After	Data Slope	0.998462	1.005755	1.005341
	Data Offset	-1.148591	-3.016668	-2.849411
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model **TEI 42C** Analyzer serial # **508011073**

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	11.0	mV	11.6	mV
NOx bkgnd	11.4	mV	12.3	mV
NO coefficient	0.878		0.916	
NOx coefficient	0.998		1.001	
NO2 conv temp	319.0	Deg C	319.0	Deg C
PMT Temp	-2.5	Deg C	-2.4	Deg C
PMT Volt	-786.0	mV	-787.0	mV
R Cell Press	211.3	in Hg	212.0	in Hg
Sample Flow	0.665	ccm	0.668	ccm

Notes:

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# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: August 11, 2009 Station Location: Henry Pirker

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4989	0.00	0.0	0.0	0.0	0.5	0.0	0.3	N/A	N/A
1	4989	39.84	392.9	392.9	0.0	392.3	392.1	0.2	1.0017	1.0021
2	4989	19.87	196.8	196.8	0.0	200.2	200.3	0.0	0.9826	0.9825
3	4989	9.91	98.3	98.3	0.0	103.1	103.4	-0.2	0.9538	0.9514
AFZ	4989	0.00	0.0	0.0	0.0	0.5	0.0	0.3	0.0000	0.0000
AFS	4989	39.84	392.9	392.9	0.0	376.3	376.9	-0.7	1.0444	1.0425
Average Correction Factor									0.9794	0.9787

As Found Concentrations: NO<sub>x</sub>= 373.0 NO= 374.5 As Found Percent Change NO<sub>x</sub>= -5.1% NO= -4.7%

## GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.5	0.0	0.3	N/A	N/A	N/A	N/A
NO point	392.2	392.2	0.0	392.4	392.2	0.1	0.9995	1.0000	N/A	N/A
300	392.2	140.6	251.6	393.5	140.6	253.0	0.9968	1.0000	0.9942	100.6%
200	392.2	220.4	171.8	393.2	220.4	173.0	0.9974	1.0000	0.9930	100.7%
100	392.2	301.3	90.9	393.2	301.3	92.2	0.9973	1.0000	0.9862	101.4%
50	392.2	346.1	46.1	394.3	346.1	48.5	0.9946	1.0000	0.9512	105.1%
Average Correction Factor							0.9972	1.0000	0.9911	100.9%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.0	0.0	ppb	-0.1	0.0	0.0	ppb
Auto span	157.8	156.7	1.0	ppb	154.9	153.6	1.2	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



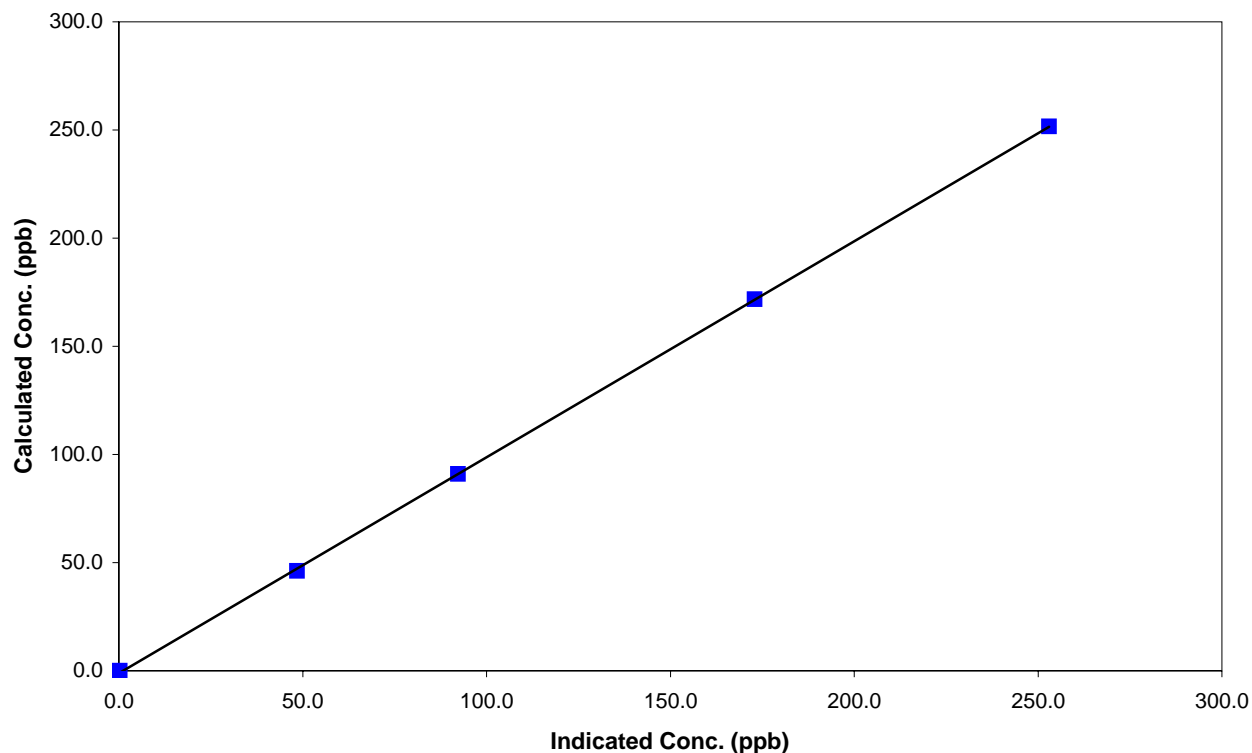
## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:10	End Time (MST)	11:33
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999949
251.6	253.0	0.9942		
171.8	173.0	0.9930	Slope	0.998462
90.9	92.2	0.9862		
46.1	48.5	0.9512	Intercept	-1.148591

## NO<sub>2</sub> Calibration Curve



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



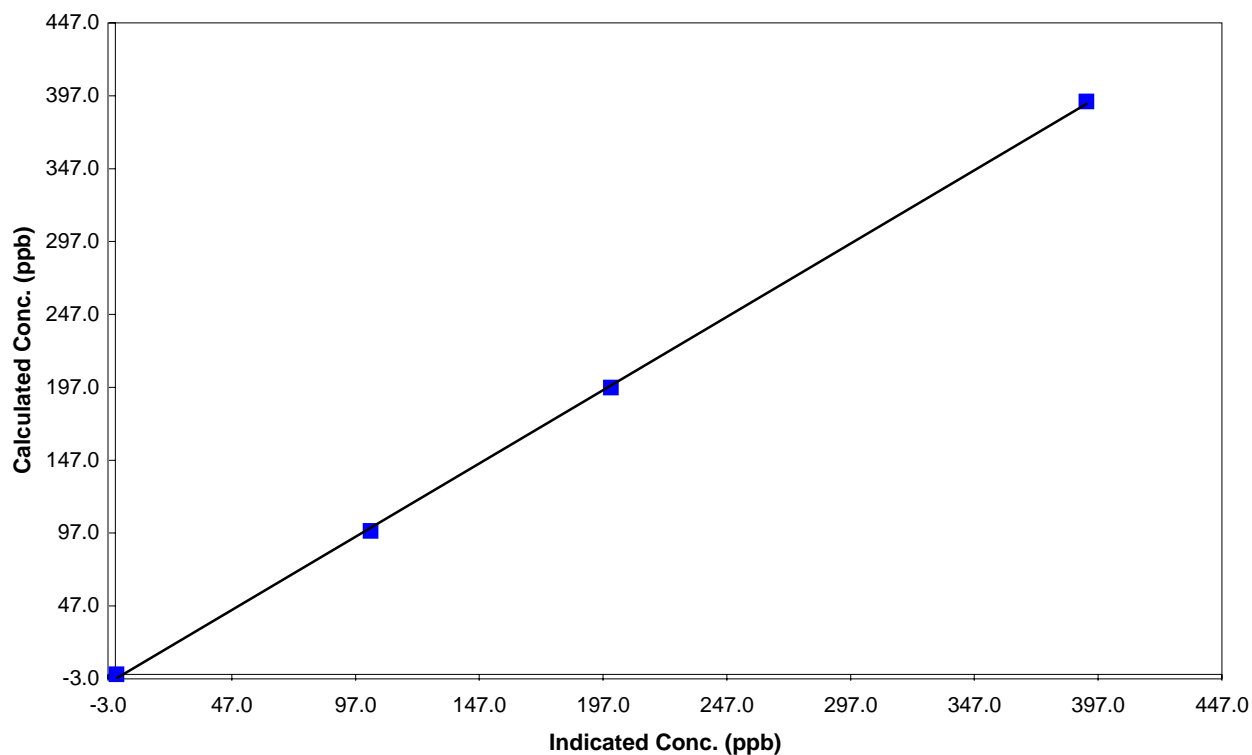
## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:10	End Time (MST)	11:33
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999805
392.9	392.3	1.0017		
196.8	200.2	0.9826	Slope	1.005755
98.3	103.1	0.9538		
			Intercept	-3.016668

## NO<sub>x</sub> Calibration Curve





# Calibration Summary



Parameter NO

Air Monitoring Network PASZA

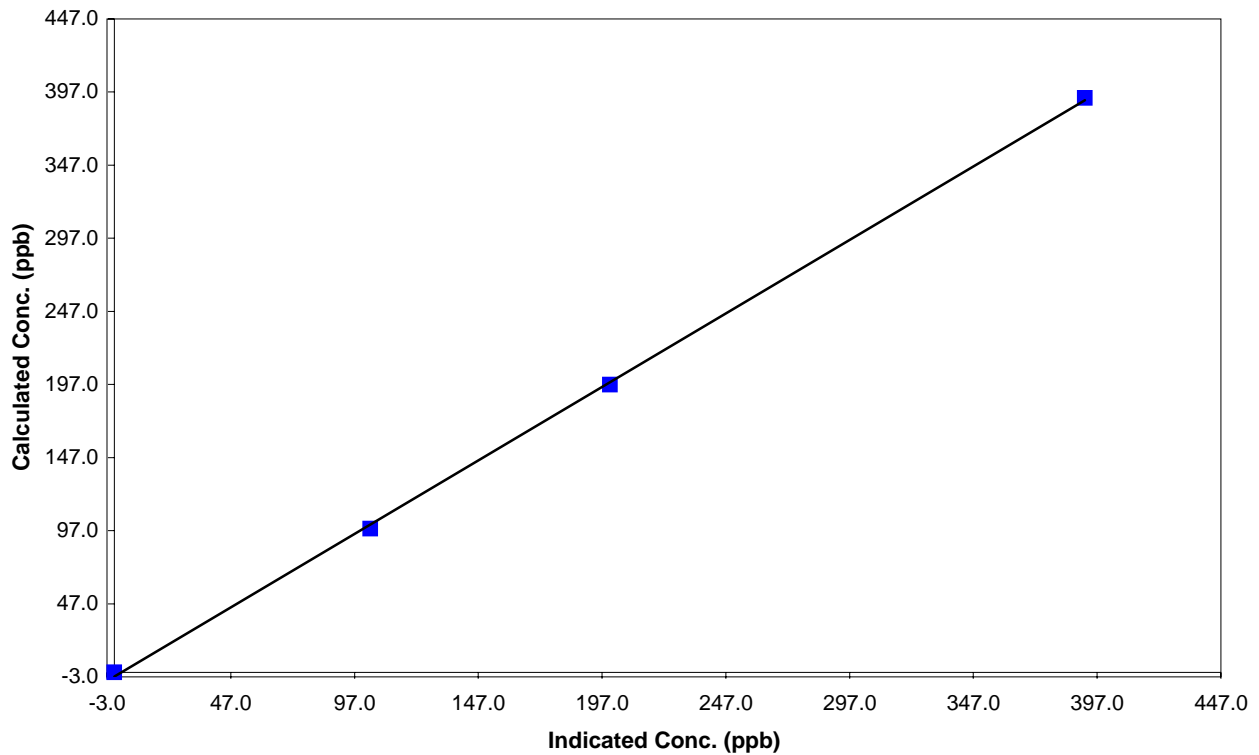
## Station Information

Calibration Date	August 11, 2009	Previous Calibration	July 11, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:10	End Time (MST)	11:33
Analyzer make	TEI 42C	Analyzer serial #	508011073

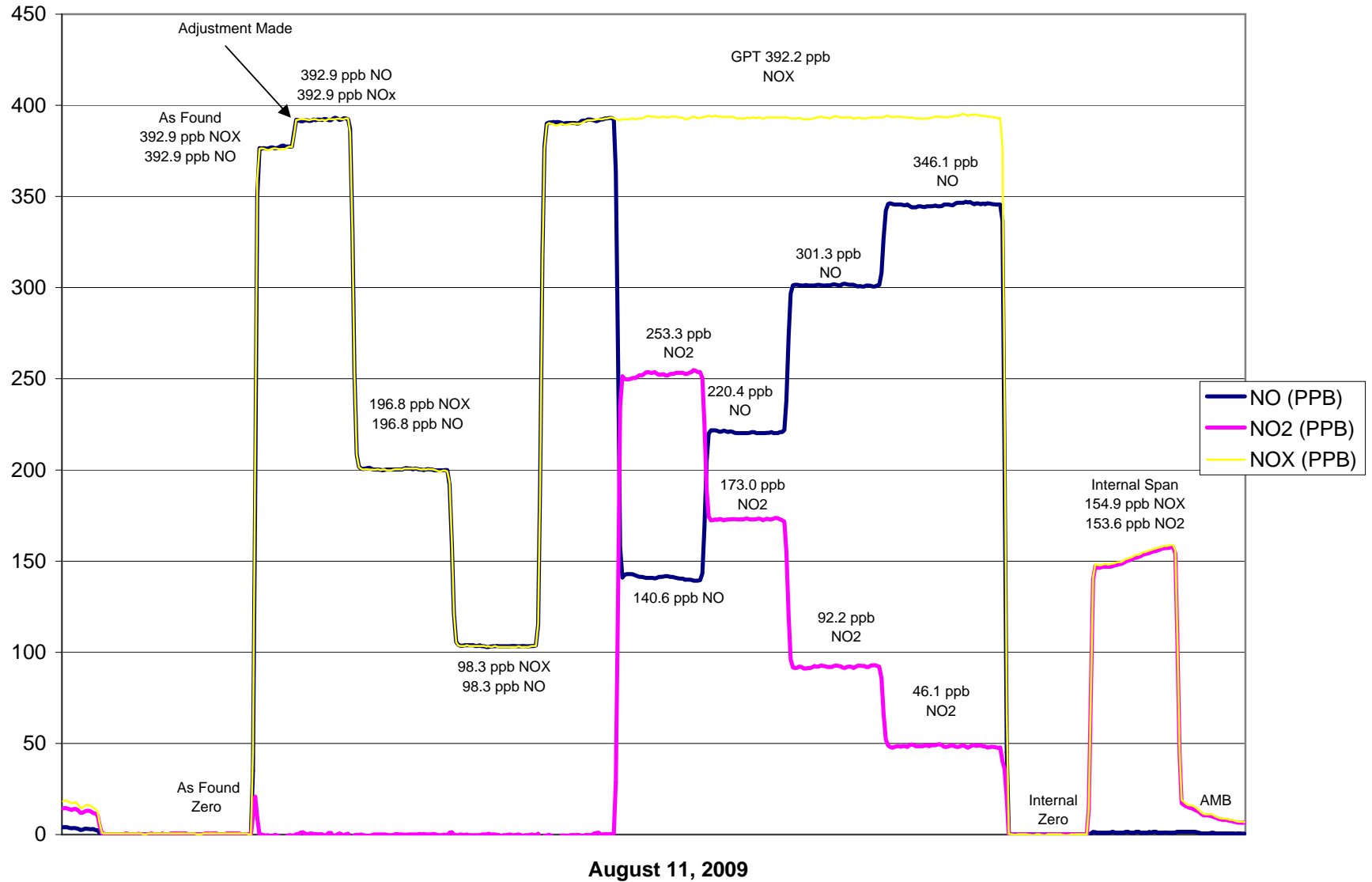
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999751
392.9	392.1	1.0021		
196.8	200.3	0.9825		
98.3	103.4	0.9514	Slope	1.005341
			Intercept	-2.849411

## NO Calibration Curve



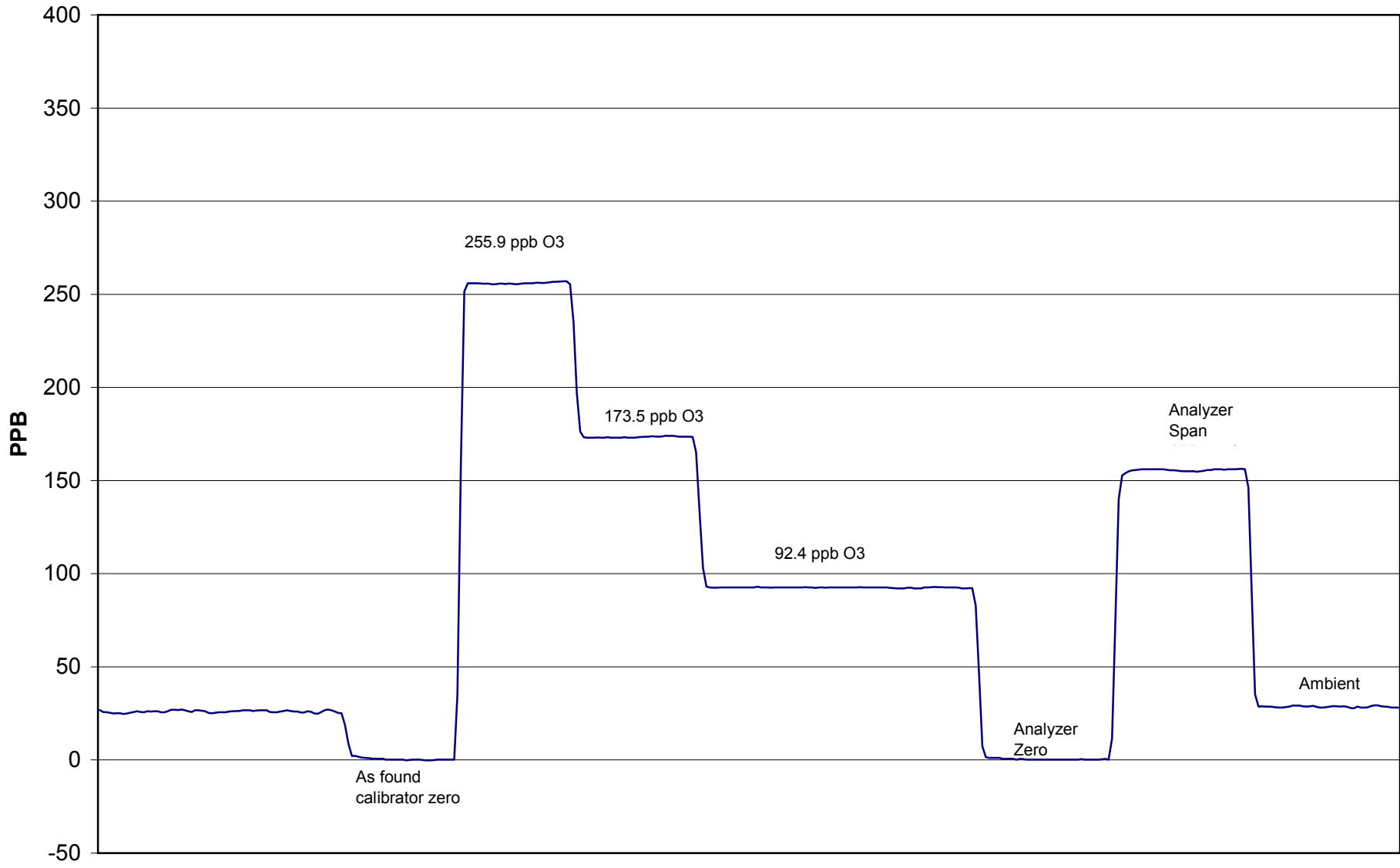
# Henry Pirker NO<sub>x</sub> Calibration







# Henry Pirker O<sub>3</sub> Calibration



August 11, 2009

# Calibration Report



Parameter CO

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 12, 2009	Previous Calibration	July 12, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	8:20	End Time (MST)	10:51
Barometric Pressure	0.930 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<b>Before</b>		<b>After</b>
Calculated slope	1.011803	Calculated slope	1.005418
Calculated intercept	-0.239982	Calculated intercept	-0.357910
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.044		1.044	
CO zero setting	6.264		6.264	
Sample pressure	689.2	mm Hg	689.5	mm Hg
Sample Flow	0.718	LPM	0.72	LPM

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.23	N/A
4991	39.85	23.76	23.92	0.9933
4991	19.88	11.90	12.26	0.9708
4991	9.94	5.96	6.41	0.9295
4990	0.00	0.00	0.11	As Found Zero
4990	39.86	23.77	23.92	As Found Span
Average Correction Factor				0.9645

Calculated value of As Found Response: 23.854 ppm      Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.34	ppm	18.93	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter CO

Air Monitoring Network PASZA

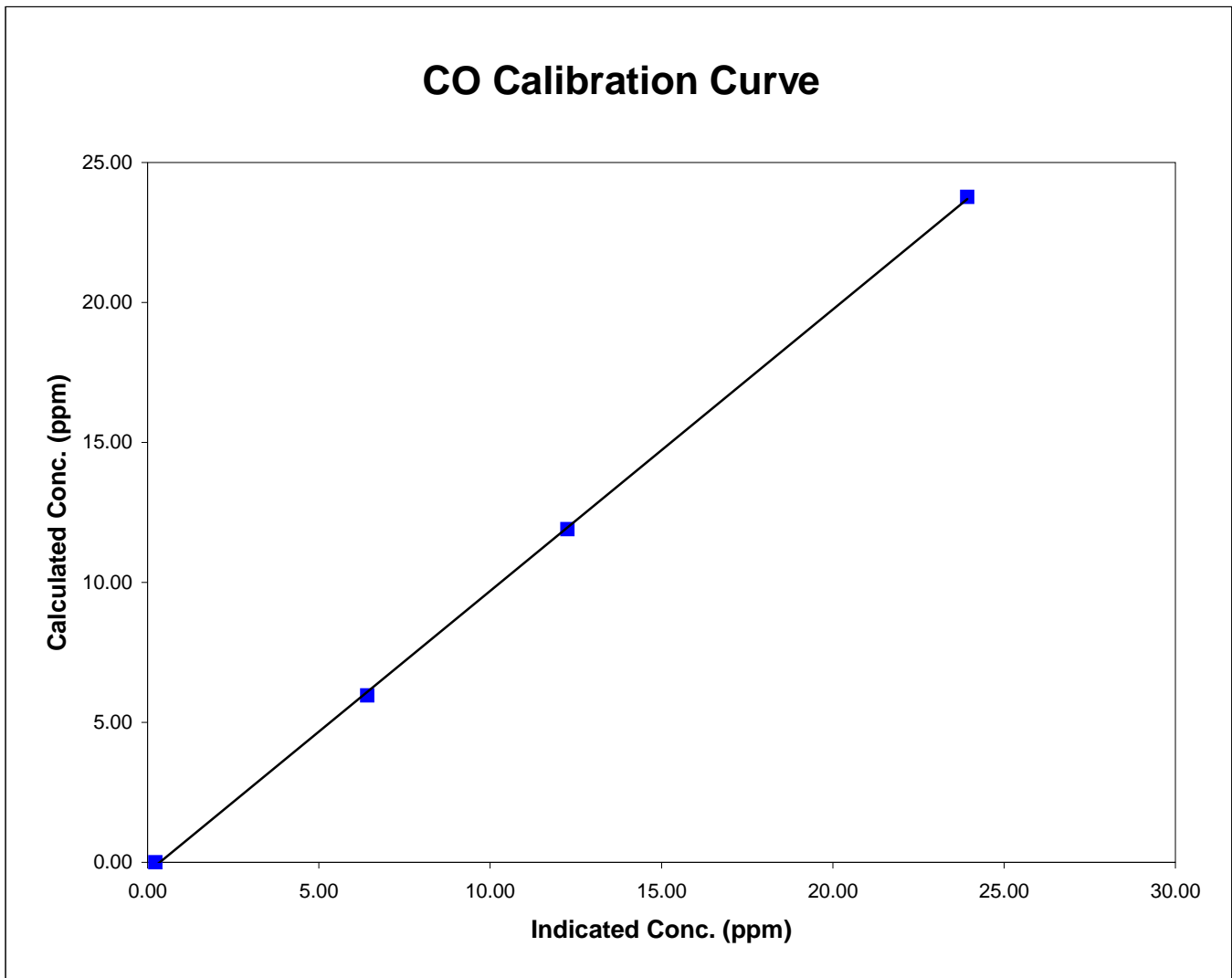


## Station Information

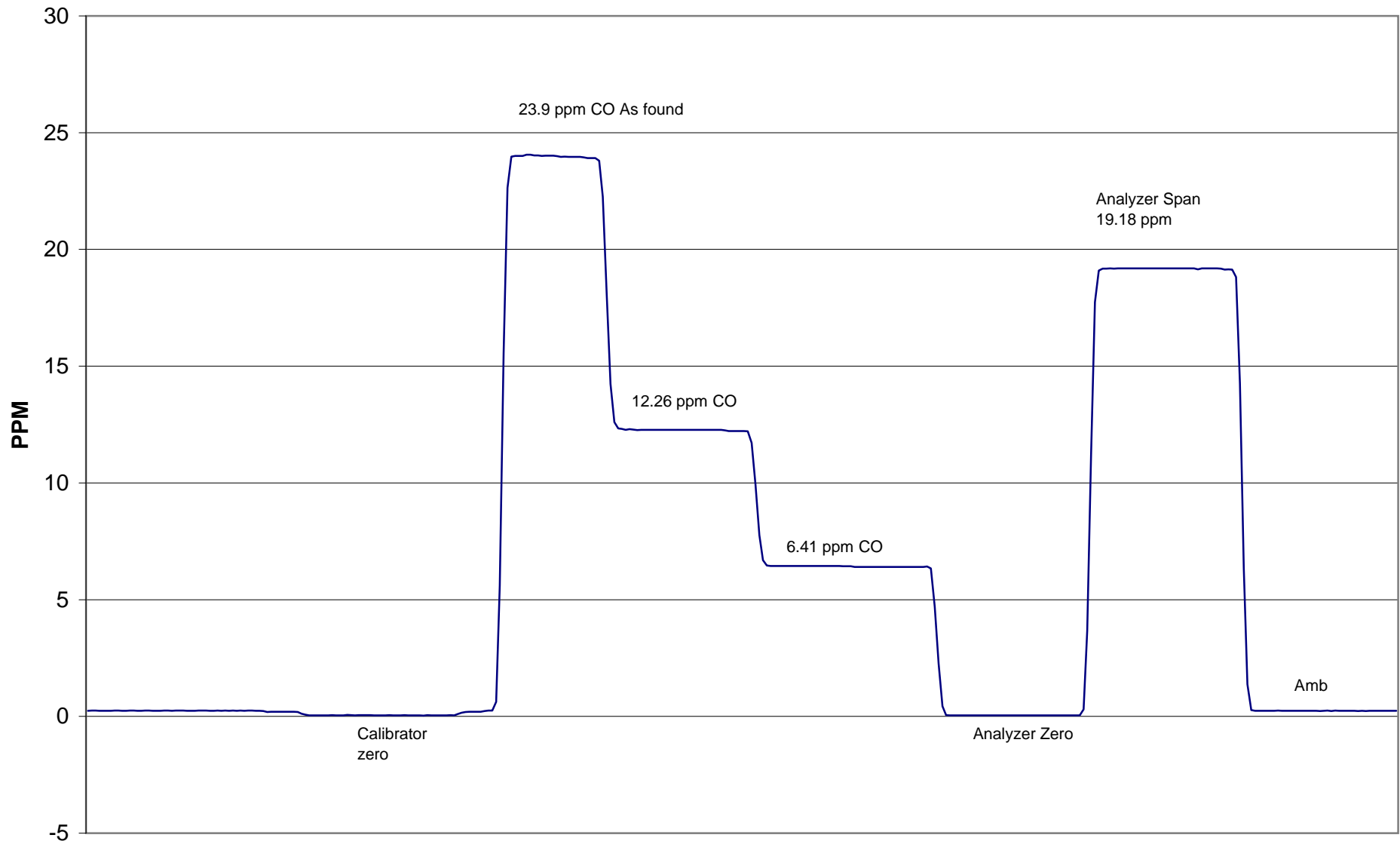
Calibration Date	August 12, 2009	Previous Calibration	July 12, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:20	End Time (MST)	10:51
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.229	N/A	Correlation Coefficient	0.999864
23.763	23.924	0.9933		
11.902	12.260	0.9708	Slope	1.005418
5.960	6.412	0.9295		
			Intercept	-0.357910



# Henry Pirker CO Calibration



August 12, 2009



# Calibration Report



Parameter THC

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 12, 2009	Previous Calibration	July 12, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	10:05	End Time (MST)	12:00
Barometric Pressure	0.930 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	1.017242	Calculated slope	1.017777
Calculated intercept	-0.058044	Calculated intercept	-0.070244
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	7205	capture	7205	capture
THC zero counts	1131	capture	1166	capture

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.07	N/A
4990	69.80	21.01	20.74	1.0131
4989	29.88	9.07	8.90	1.0189
4988	9.92	3.02	3.09	0.9792
4988	0.00	0.00	0.07	As Found Zero
4988	69.82	21.03	20.72	As Found Span
Average Correction Factor				1.0037

Calculated value of As Found Response: 20.953 ppm      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	-0.02	ppm	-0.03	ppm
Auto span	22.85	ppm	23.11	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter THC  
 Air Monitoring Network PASZA

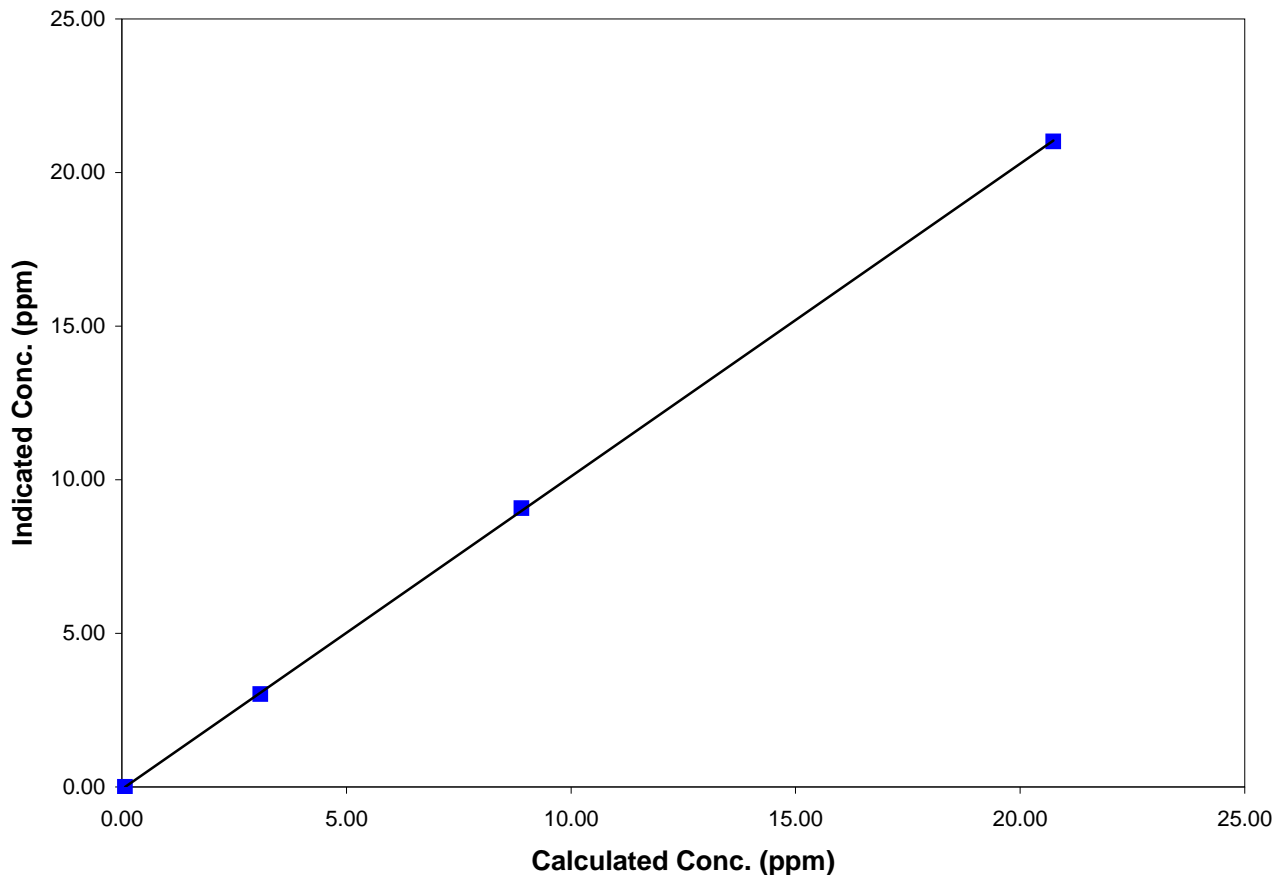
### Station Information

Calibration Date	August 12, 2009	Previous Calibration	March 24, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	12:00
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

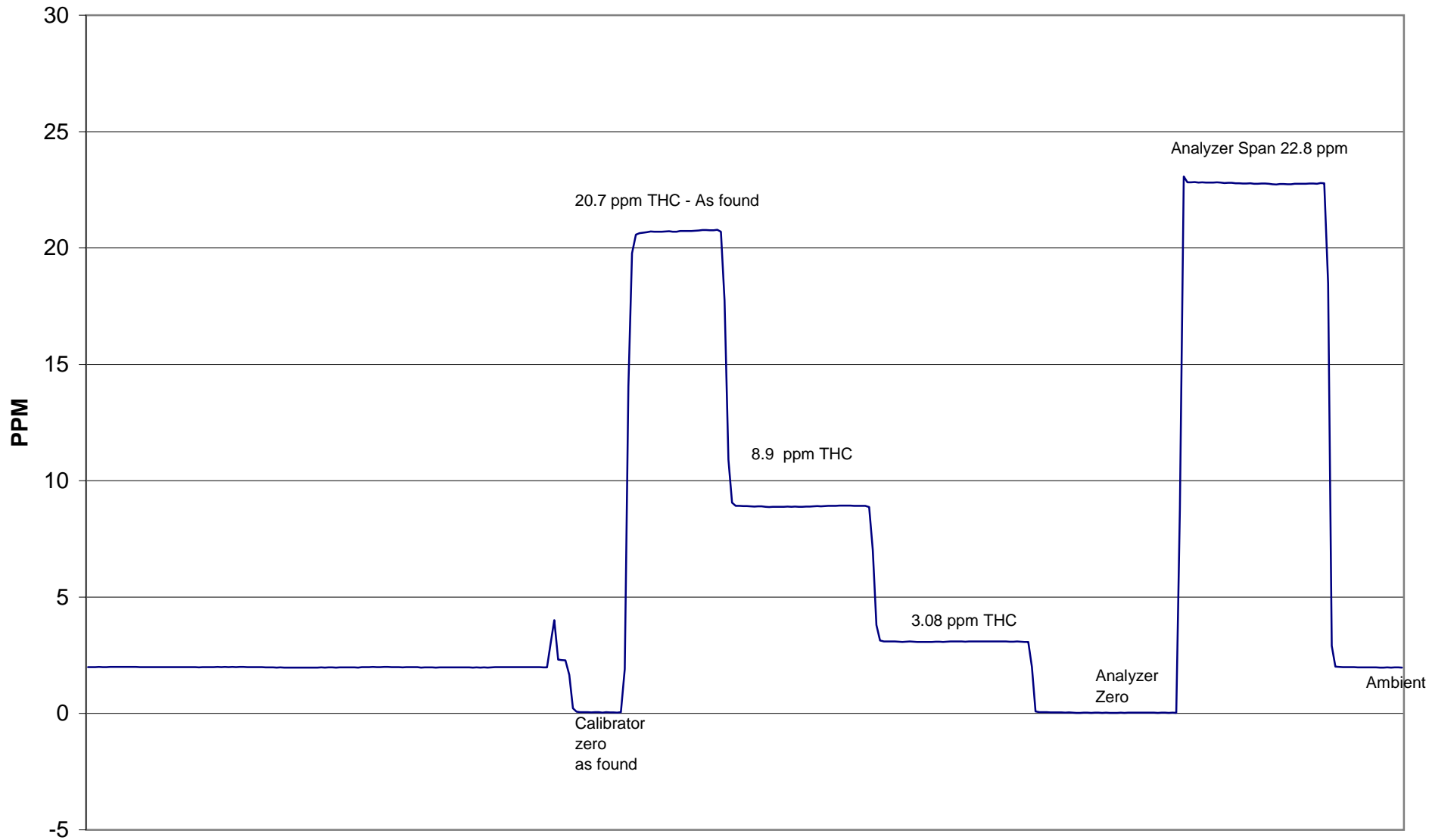
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.073	N/A		
21.013	20.742	1.0131	Correlation Coefficient	0.999963
9.069	8.900	1.0189		
3.023	3.088	0.9792	Slope	1.017777
			Intercept	-0.070244

## THC Calibration Curve



# Henry Pirker THC Calibration



August 12, 2009

# Calibration Report



Parameter SO<sub>2</sub>  
 Air Monitoring Network PASZA

## Station Information

Calibration Date	August 18, 2009	Previous Calibration	July 9, 2009
Station Number	2	Station Location	Evergreen Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	8:30	End Time (MST)	11:20
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031443	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.002548	Calculated slope	1.002863
Calculated intercept	-1.737454	Calculated intercept	-2.052943
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.3		10.3	
coefficient	1.026		1.015	
Lamp Voltage	825	volts	825	volts
Chamber Temp	45	Deg C	45.3	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	665.8	mm Hg	665.5	mm Hg
Sample Flow	446	ccm	447	ccm
Lamp Intensity	90	%	90	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.0	N/A
4989	39.85	400.97	400.7	1.0006
4989	19.88	200.83	203.6	0.9863
4989	9.93	100.51	104.1	0.9653
4990	0.0	0.00	0.7	As Found Zero
4988	39.82	400.75	403.9	As Found Span
Average Correction Factor				0.9841

Calculated value of As Found Response: 402.549 ppm      Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	1.1	ppm	0.7	ppm
Auto span	272.0	ppm	272.0	ppm

### Notes:

Calibration Performed By: Grover Christiansen

# Calibration Summary



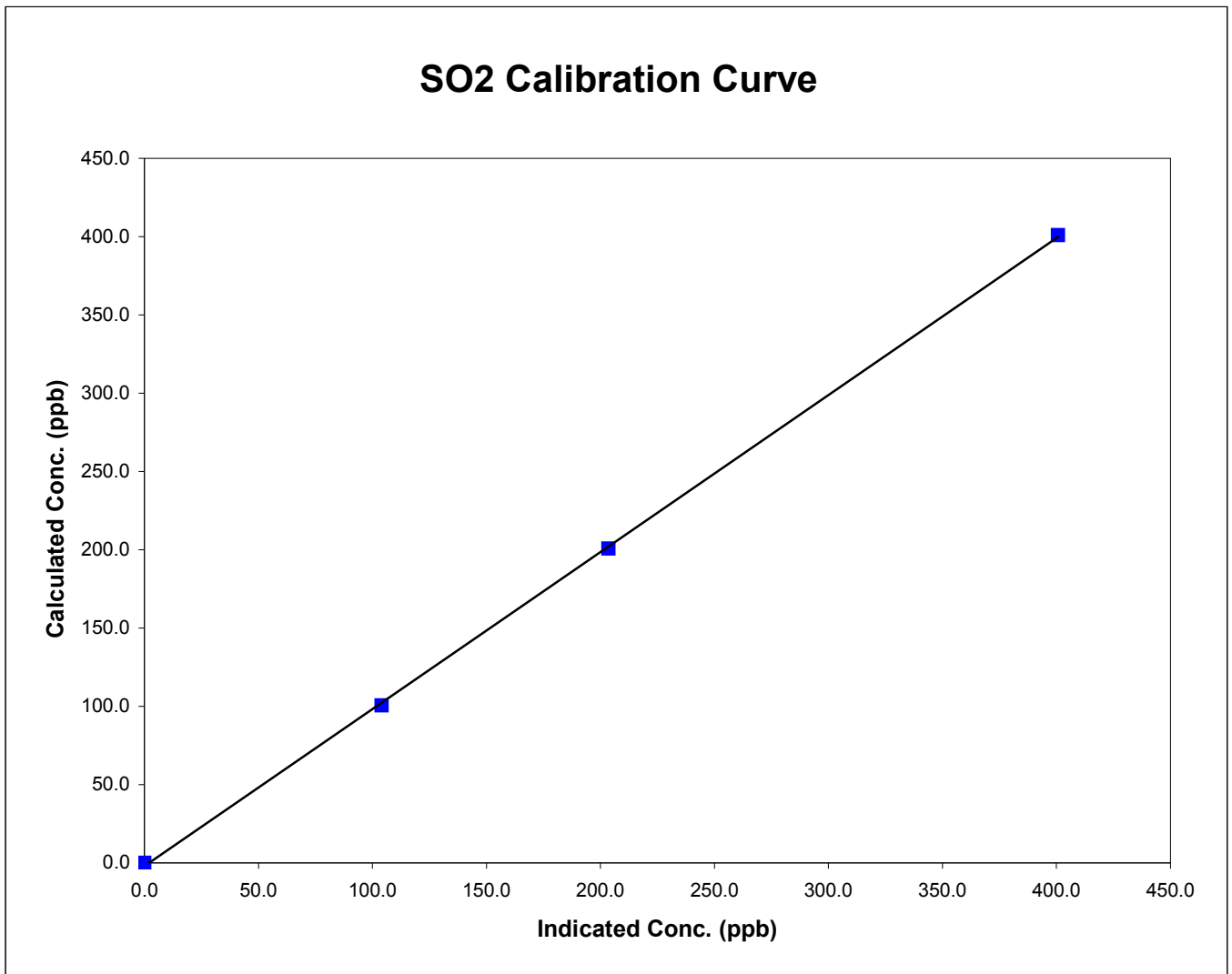
Parameter SO2  
 Air Monitoring Network PASZA

### Station Information

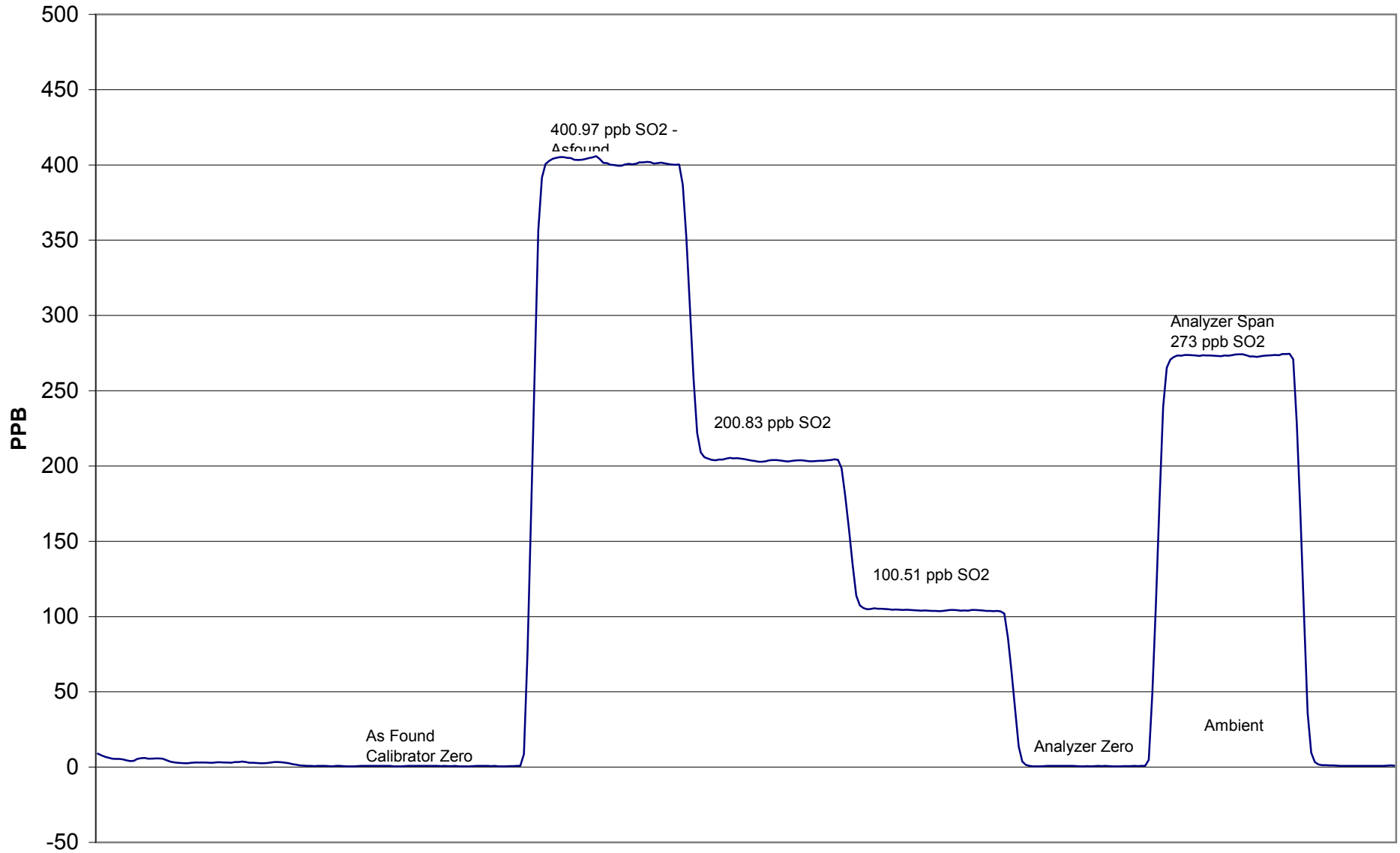
Calibration Date	August 18, 2009	Previous Calibration	July 9, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:30	End Time (MST)	12:20
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
401.0	400.7	1.0006	Correlation Coefficient	0.999880
200.8	203.6	0.9863		
100.5	104.1	0.9653	Slope	1.002863
			Intercept	-2.052943



# Evergreen Park SO<sub>2</sub> Calibration



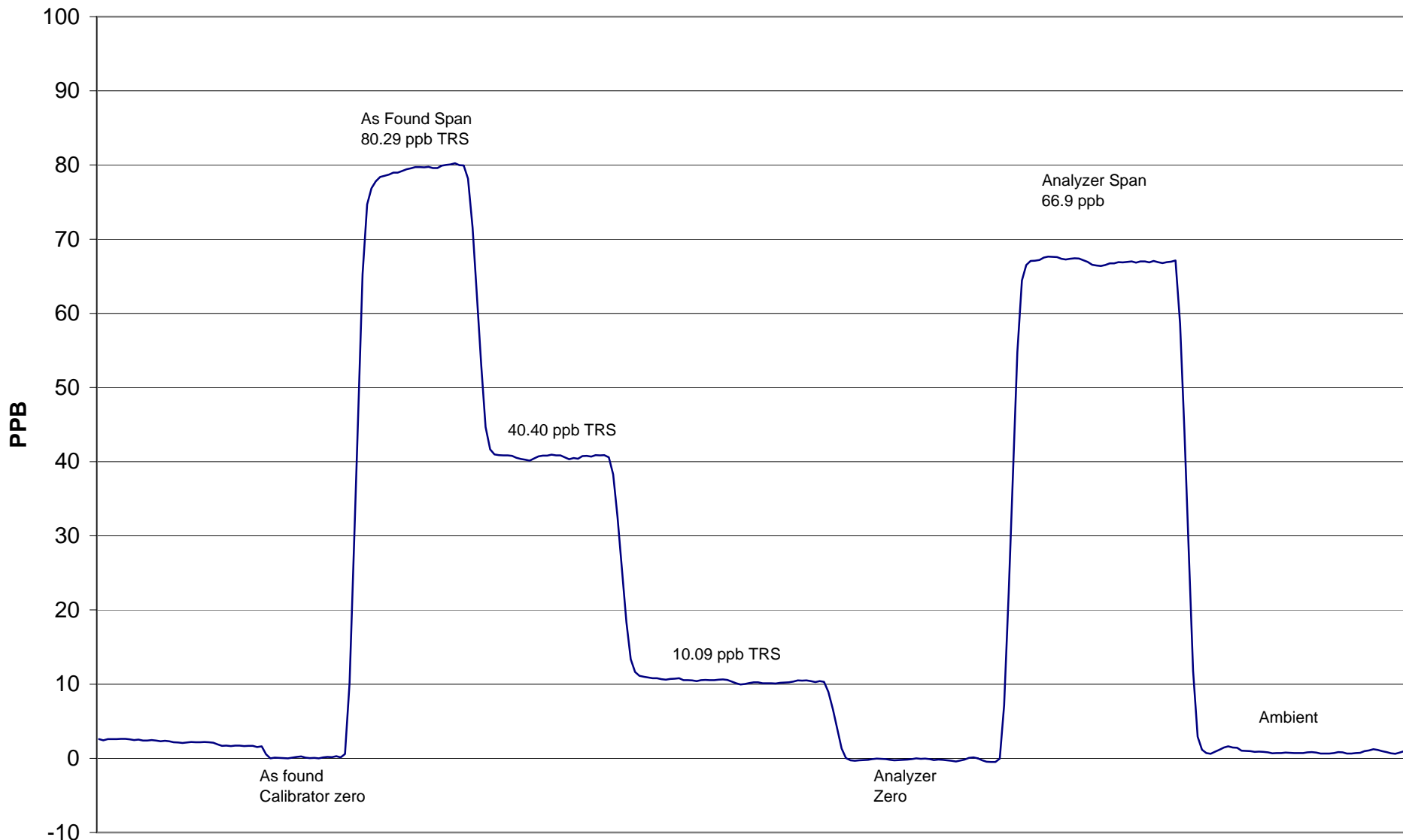
August 18, 2009







# Evergreen Park TRS Calibration



August 18, 2009

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 26, 2009	Previous Calibration	July 21, 2009
Station Number	3	Station Location	Smoky Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	7:10	End Time (MST)	10:09
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	6/8/2008
Correction factor	0.031749	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.001333	Calculated slope	1.003717
Calculated intercept	-1.713132	Calculated intercept	-1.744805
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.5		7.6	
coefficient	0.693		0.703	
Lamp Voltage	920	volts	917	volts
Chamber Temp	45	Deg C	45.1	Deg C
Perm Gas Temp	44.99	Deg C	45	Deg C
Pressure	673.2	mm Hg	673.1	mm Hg
Sample Flow	445	ccm	440	ccm
Lamp Intensity	87	%	88	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.00	0.2	N/A
4988	39.80	400.55	400.2	1.0008
4988	19.92	201.27	202.3	0.9948
4988	9.92	100.43	103.8	0.9672
4988	0.0	0.00	0.6	As Found Zero
4988	39.81	400.65	393.6	As Found Span
Average Correction Factor				0.9876

Calculated value of As Found Response: 391.851 ppm      Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	-0.9	ppm	-1.3	ppm
Auto span	305.5	ppm	309.8	ppm

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen

# Calibration Summary



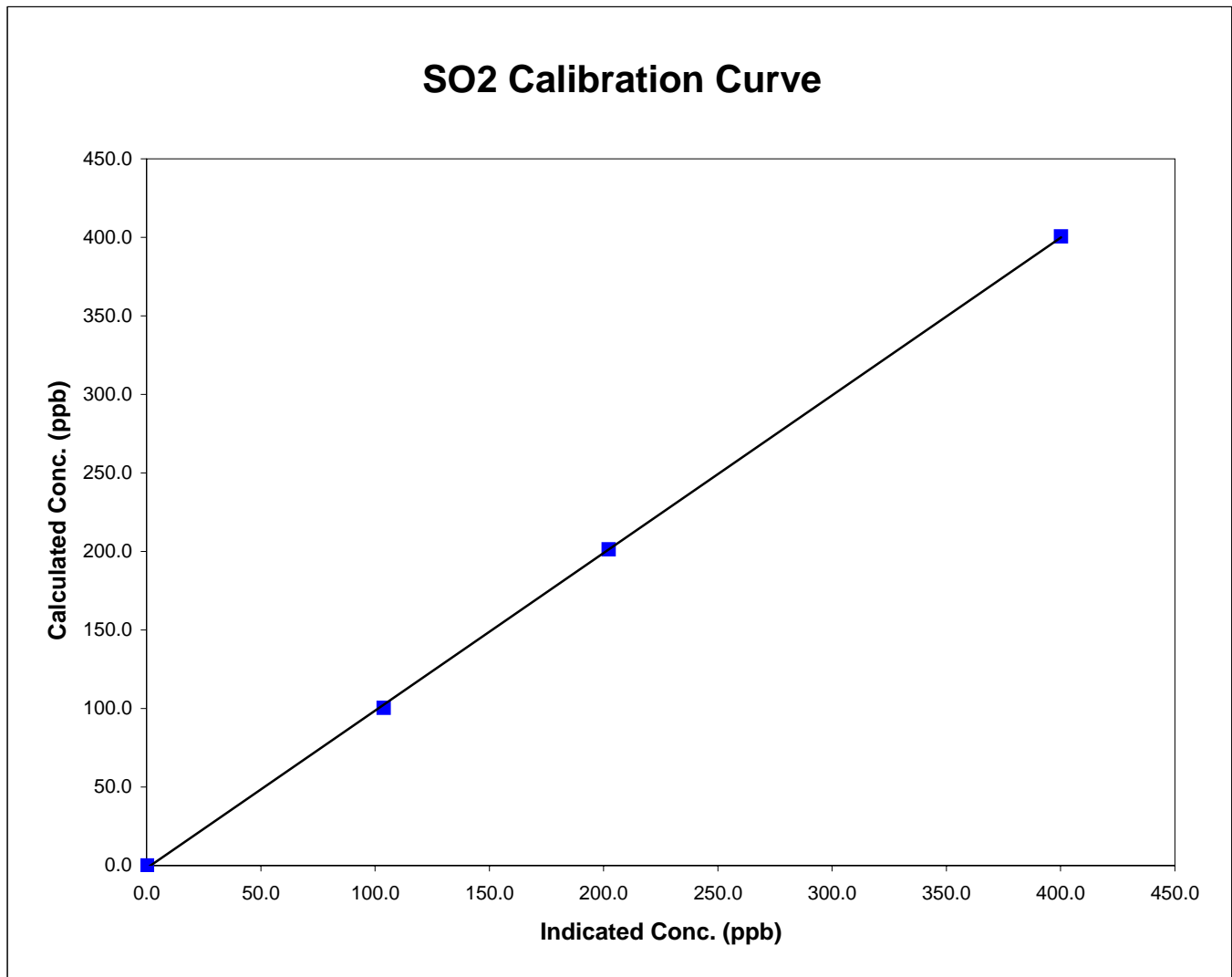
Parameter SO2  
 Air Monitoring Network PASZA

### Station Information

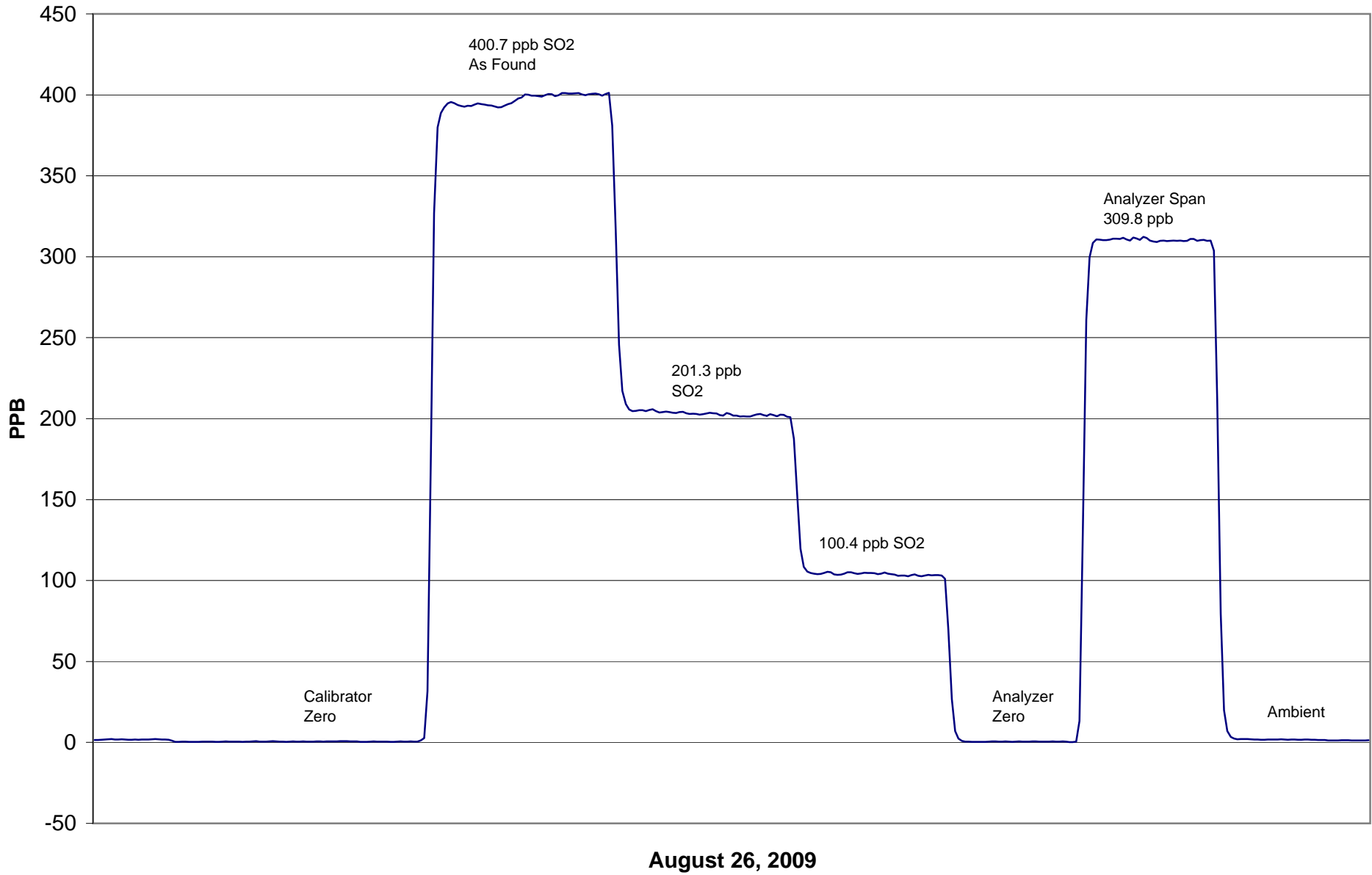
Calibration Date	August 26, 2009	Previous Calibration	July 21, 2009
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	7:10	End Time (MST)	10:09
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999921
400.5	400.2	1.0008		
201.3	202.3	0.9948		
100.4	103.8	0.9672	Slope	1.003717
			Intercept	-1.744805



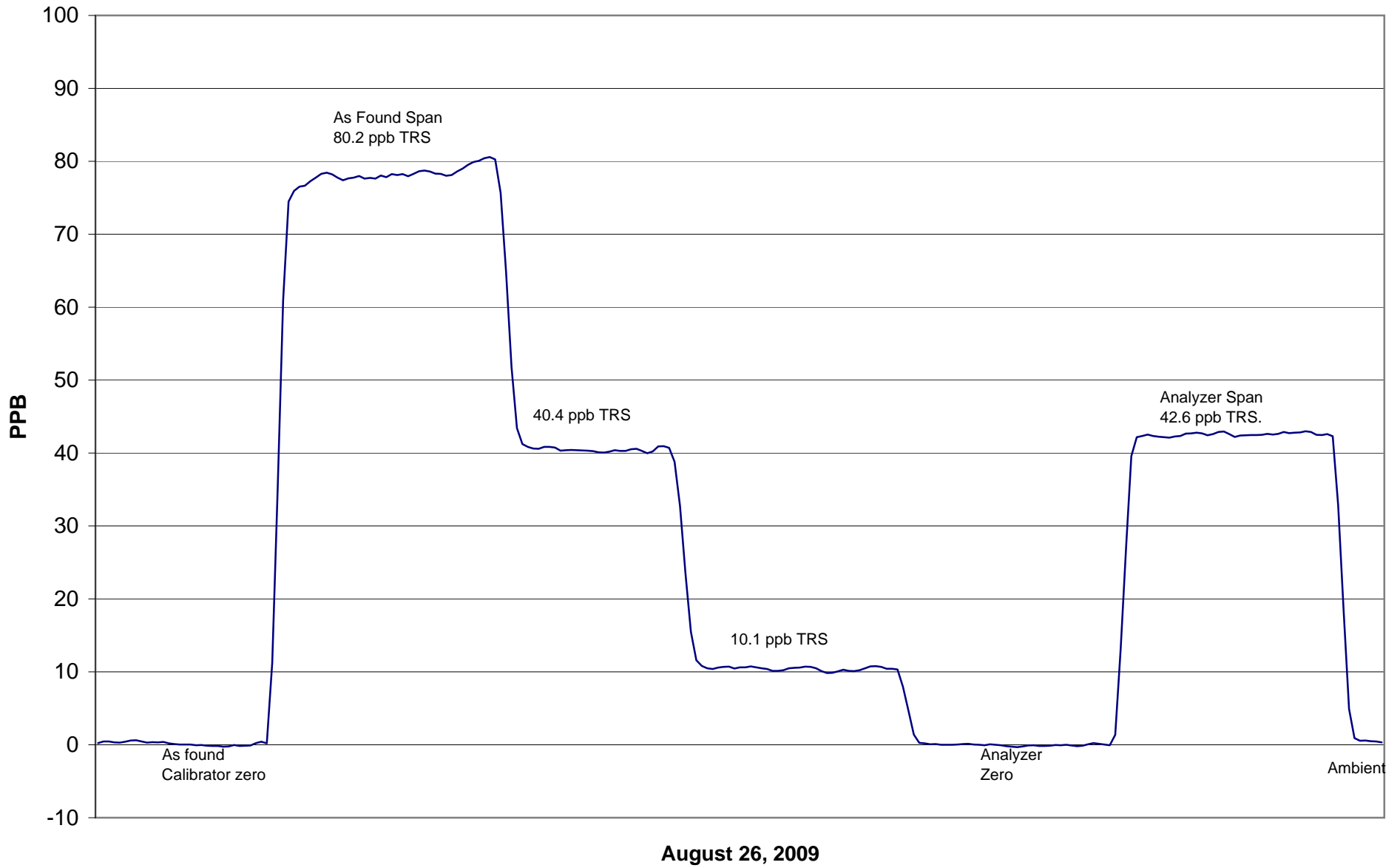
# Smoky Heights SO<sub>2</sub> Calibration







# Smoky Heights TRS Calibration



# PERFORMANCE AUDIT OF PM 2.5 MONITOR

STATION: Smokey Heights

OPERATOR: Grover Christianser

DATE: 26/08/2009

LOCATION: PASZA - Grande Prairie

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	3
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

( vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube )

RECENT CALIBRATION AND AUDIT HISTORY

Audit	26/08/2009
Audit	PASS
Calibration	

PUMP CAPACITY CHECK *	PASS
-----------------------	------

\* capacity to maintain flow rate at or near set point at simulated 90% filter loading. "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.01	0.01
PUMP OFF	0.00	0
NET	0.01	0.01
<b>LIMITS</b>	<b>&lt;0.15</b>	<b>&lt;0.65</b>

	Ambient Temp. (°C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT ( S )	na	na	12122	13.67	3.00
INDICATED ( I )	20.8	935	12122	13.67	3.00
MEASURED ( M )	20.0	934	12168	13.44	3.10
	( M - I )				
DIFFERENCE	-0.8	-1.000	0.4	-1.7	3.3
<b>LIMITS</b>	<b>± 5 °C</b>	<b>± 0.013 atm</b>	<b>± 2.5 %</b>	<b>± 10 %</b>	<b>± 10 %</b>

COMMENTS:

Pass - Monitor is within limits.

Measured barometric pressure of 946 hPa = .934 converted to atm.

Pump may be loosing a little vacuum will replace next cal.



# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 13, 2009	Previous Calibration	July 13, 2009
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	6:40	End Time (MST)	11:43
Barometric Pressure	0.917 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998950	Calculated slope	1.002767
Calculated intercept	-0.238475	Calculated intercept	-0.332922
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.32		2.35	
Coefficient	0.892		0.892	
PMT	-813.3	V	-813	V
UV Lamp Voltage	1058	V	1054	V
Chamber Temp	44.8	Deg C	45.1	Deg C
Pressure	688.5	mm Hg	688.5	mm Hg
Sample Flow	0.48	LPM	0.48	LPM
Lamp Intesity	85%	%	85%	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4989	39.84	79.7	79.6	1.0010
4988	19.87	39.9	40.3	0.9902
4988	9.91	19.9	20.6	0.9678
4988	0.00	0.0	0.1	As found zero
4988	39.90	79.8	80.6	As found span
Average Correction Factor				0.9863

Calculated value of As Found Response: 80.156 ppm      Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	-0.3	ppm	-0.2	ppm
Auto span	57.8	ppm	55.5	ppm

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



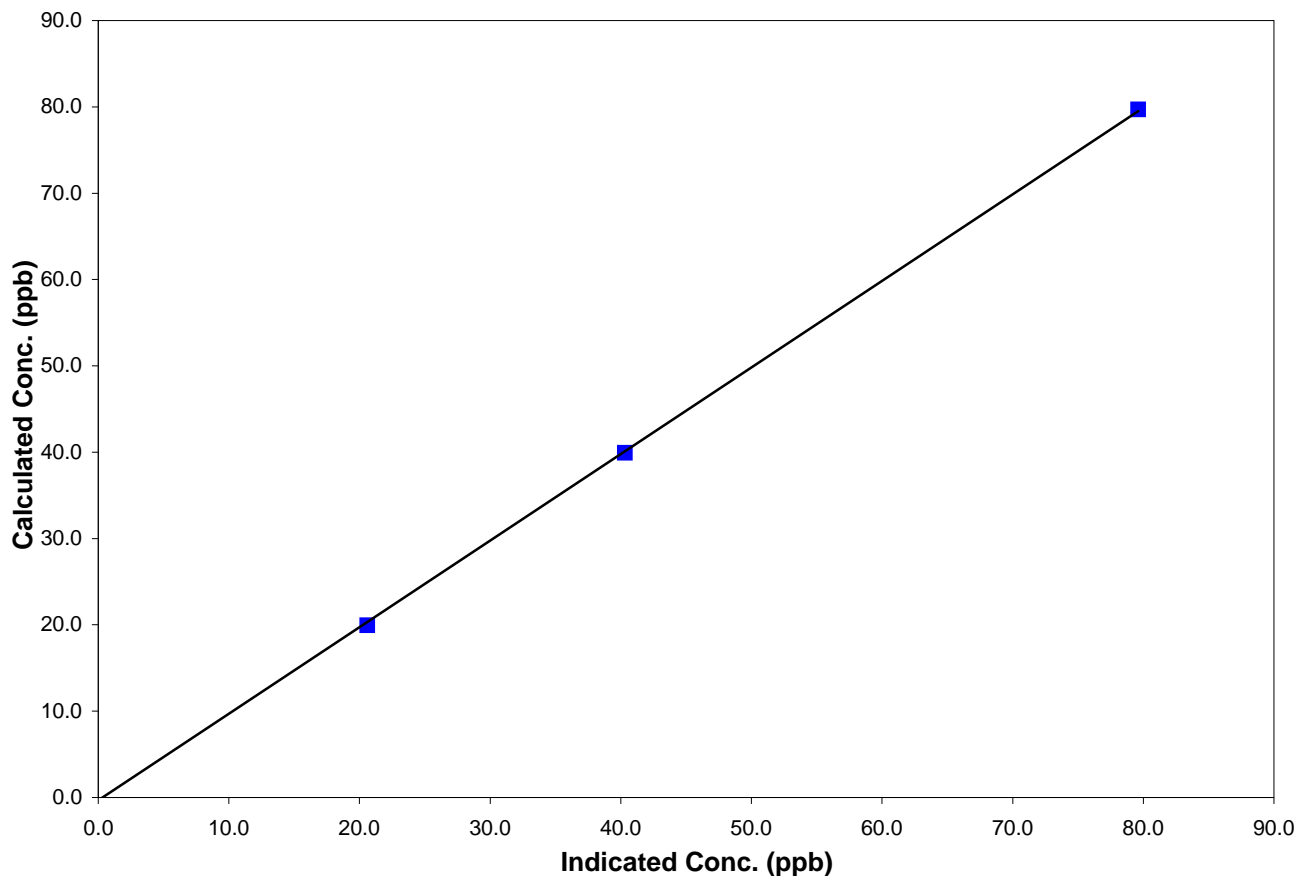
## Station Information

Calibration Date	August 13, 2009	Previous Calibration	July 13, 2009
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	6:40	End Time (MST)	11:43
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

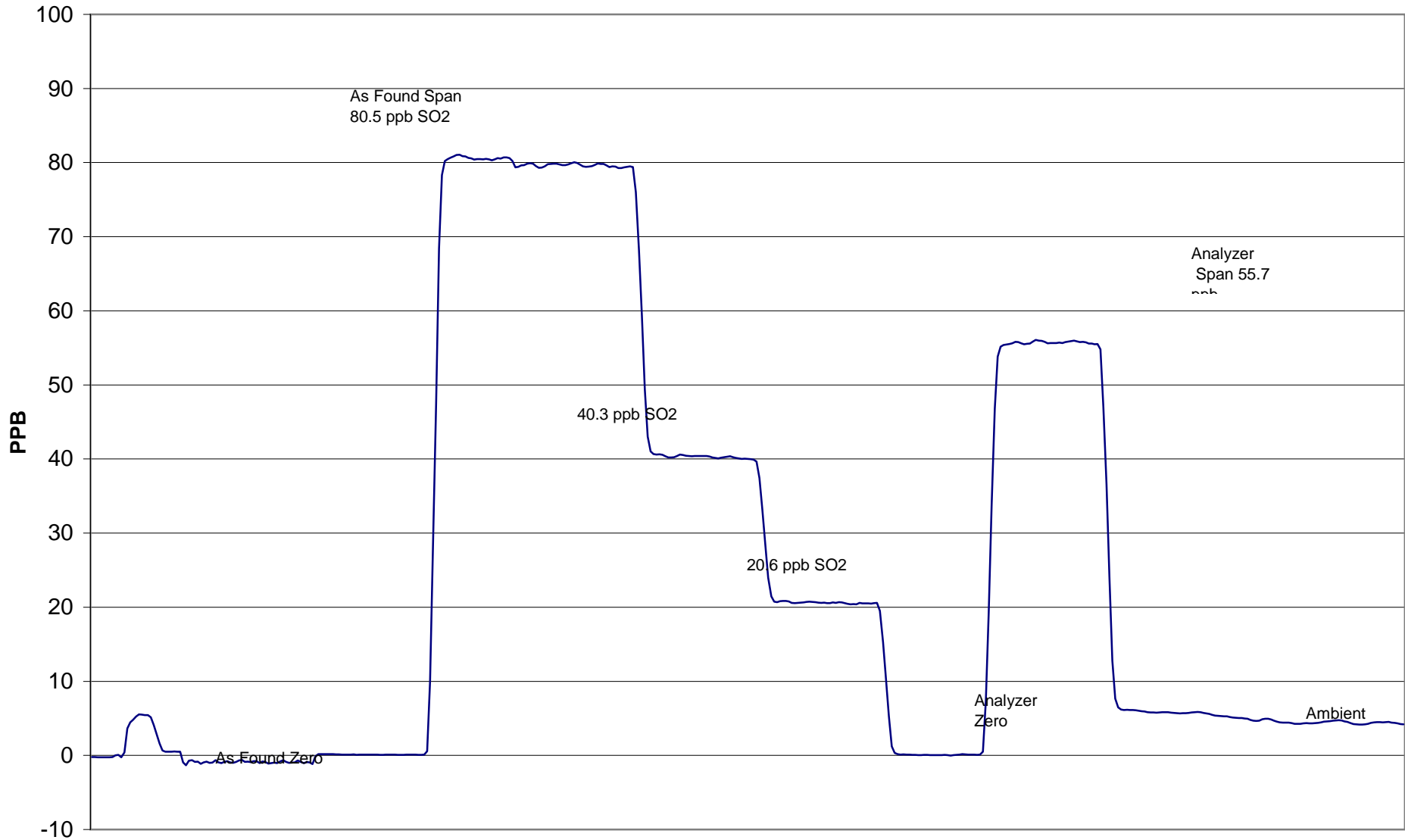
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
79.7	79.6	1.0010	Correlation Coefficient	0.999898
39.9	40.3	0.9902		
19.9	20.6	0.9678	Slope	1.002767
			Intercept	-0.332922

## SO2 Calibration Curve



# Beaverlodge SO<sub>2</sub> Calibration



August 13, 2009

# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date	August 13,2009	Previous Calibration	July 13,2009
Station Number	4	Station Location	BeaverLodge
Reason:	Routine	Installation	Removal
Other:	_____		
Start Time (MST)	7:00	End Time (MST)	13:13
Barometric Pressure	0.919	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	50.1	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	50.2	ppm	Cal Gas Serial #
			CC114395

## DACS Information

DACS make Focus AP1000 DACS serial No. \_\_\_\_\_

Parameter		NO2	NOx	NO
Before	Data Slope	0.993183	1.014143	1.012635
	Data Offset	-0.273855	-2.175938	-1.187344
After	Data Slope	0.994727	1.014682	1.014667
	Data Offset	-0.335880	-2.433413	-1.675203
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model **TEI 42i** Analyzer serial # **906535068**

Test Point	before		after	
	Concentration range	ppb	Concentration range	ppb
NO offset	2.0	mV	2.1	mV
NOx bkgnd	2.4	mV	2.8	mV
NO coefficient	1.070		1.130	
NOx coefficient	0.992		0.991	
NO2 conv temp	323.9	Deg C	323.4	Deg C
PMT Temp	-3.0	Deg C	-3.2	Deg C
PMT Volt	-676.4	mV	-676.4	mV
R Cell Press	153.7	in Hg	154.2	in Hg
Sample Flow	0.891	ccm	0.890	ccm

Notes:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: **August 13, 2009** Station Location: **BeaverLodge**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4988	0.00	0.0	0.0	0.0	0.1	-0.1	0.0	N/A	N/A
1	4988	39.84	397.8	397.0	0.8	393.0	391.8	-0.2	1.0121	1.0132
2	4988	19.87	199.2	198.8	0.4	200.4	199.0	0.9	0.9940	0.9990
3	4988	9.91	99.5	99.3	0.2	102.5	100.9	1.2	0.9710	0.9841
AFZ	4988	0.00	0.0	0.0	0.0	0.1	-0.1	0.0	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	377.1	376.2	-0.4	1.0547	1.0552
Average Correction Factor									0.9924	0.9988

As Found Concentrations: **NO<sub>x</sub>= 374.9** **NO= 375.1** As Found Percent Change **NO<sub>x</sub>= -5.8%** **NO= -5.5%**

## GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.1	-0.1	0.0	N/A	N/A	N/A	N/A
NO point	391.6	391.6	0.0	393.0	391.6	0.0	0.9964	1.0000	N/A	N/A
300	391.6	124.2	267.4	394.0	124.2	268.9	0.9939	1.0000	0.9944	100.6%
200	391.6	209.7	181.9	393.9	209.7	183.4	0.9940	1.0000	0.9919	100.8%
100	391.6	294.4	97.1	393.5	294.4	98.2	0.9950	1.0000	0.9889	101.1%
50	391.6	340.4	51.2	393.5	340.4	52.0	0.9950	1.0000	0.9840	101.6%
Average Correction Factor							0.9943	1.0000	0.9918	100.8%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.0	-0.1	ppb	0.1	0.0	-0.1	ppb
Auto span	189.7	187.7	2.2	ppb	180.1	178.7	2.2	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



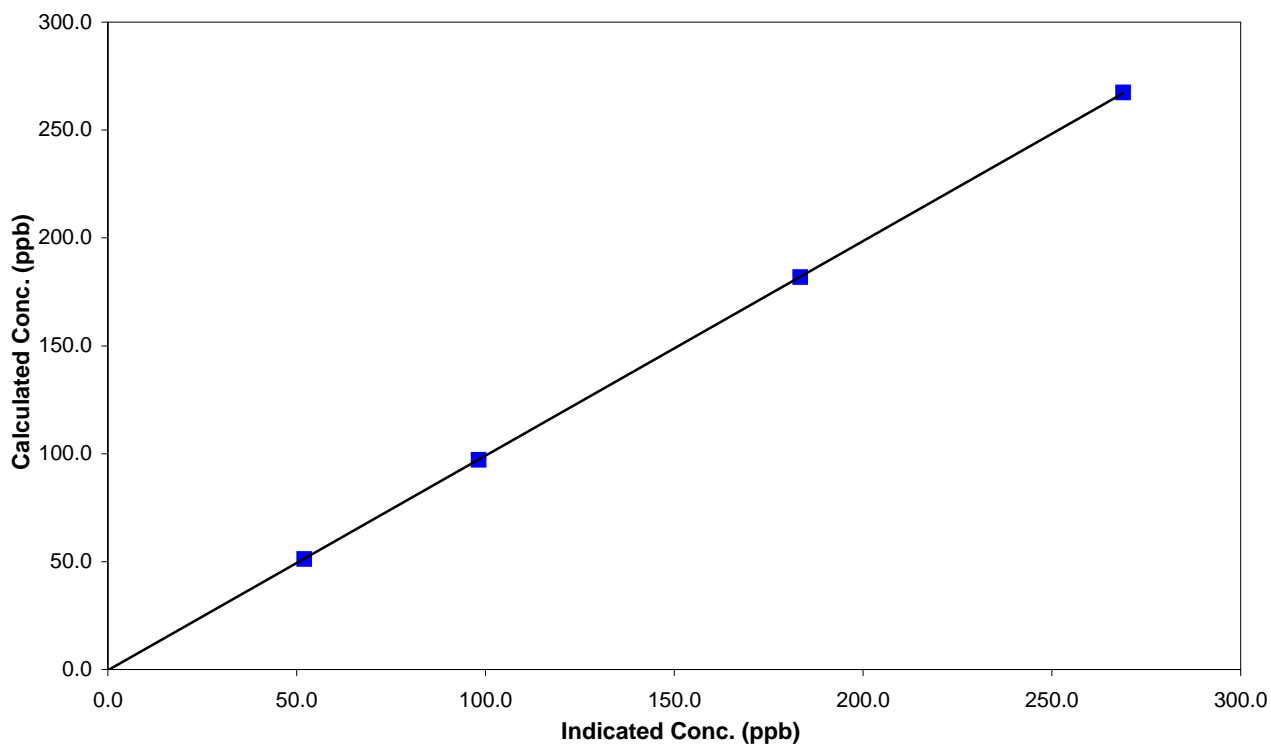
## Station Information

Calibration Date	August 13,2009	Previous Calibration	July 13,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	7:00	End Time (MST)	13:13
Analyzer make	TEI 42i	Analyzer serial #	60475-327

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999992
267.4	268.9	0.9944		
181.9	183.4	0.9919	Slope	0.994727
97.1	98.2	0.9889		
51.2	52.0	0.9840	Intercept	-0.335880

## NO<sub>2</sub> Calibration Curve



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



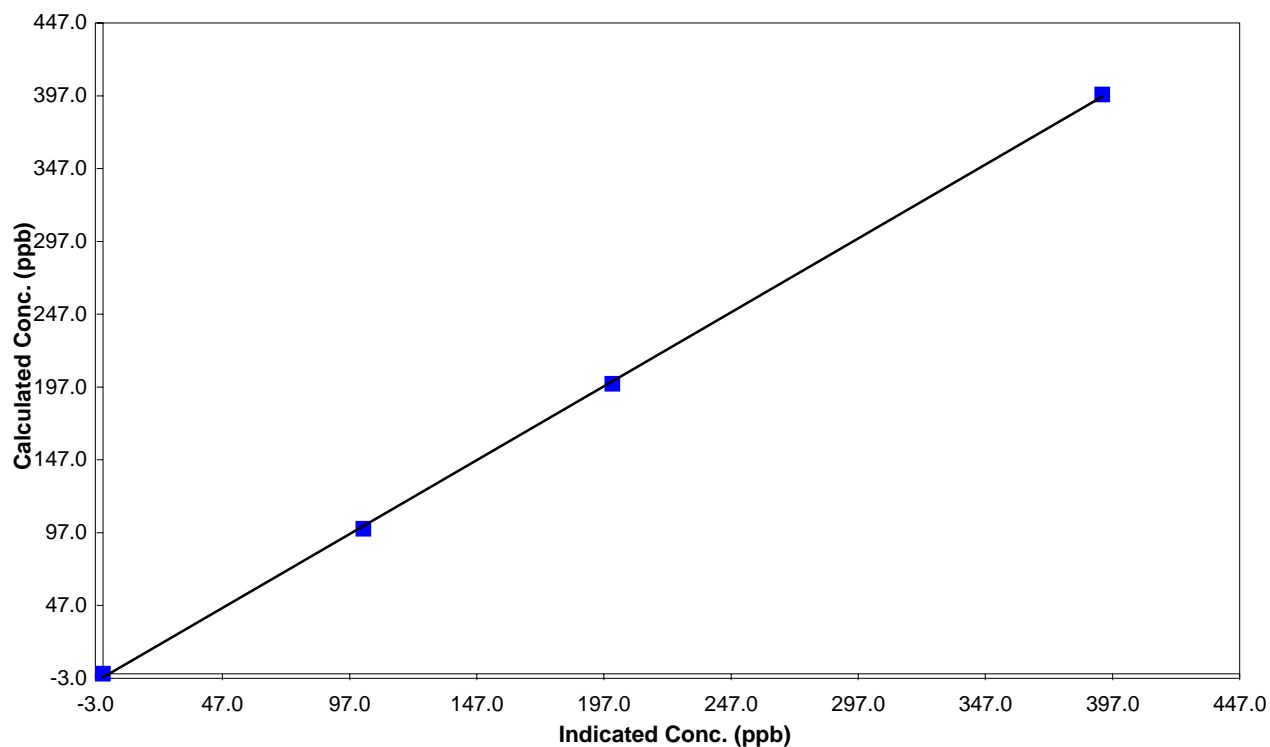
## Station Information

Calibration Date	August 13,2009	Previous Calibration	July 13,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	7:00	End Time (MST)	13:13
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999831
397.8	393.0	1.0121		
199.2	200.4	0.9940		
99.5	102.5	0.9710	Slope	1.014682
			Intercept	-2.433413

## NO<sub>x</sub> Calibration Curve



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



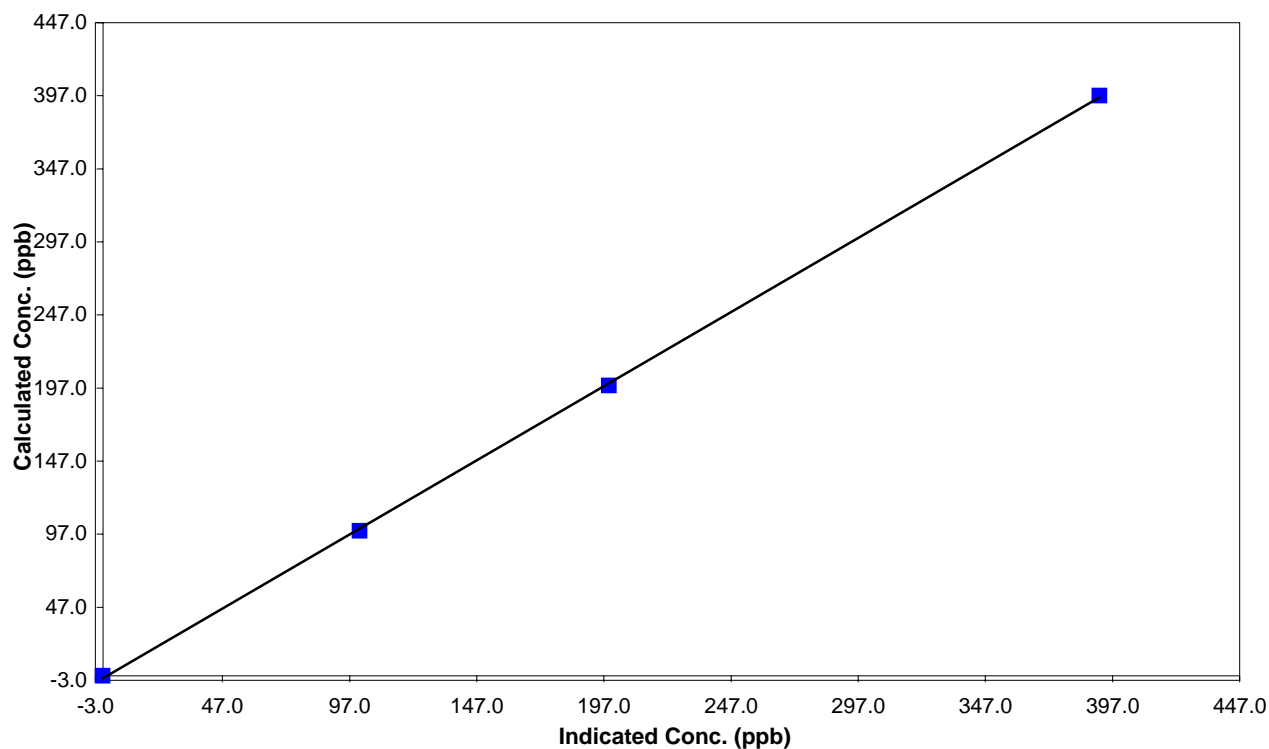
## Station Information

Calibration Date	August 13,2009	Previous Calibration	July 13,2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	7:00	End Time (MST)	13:13
Analyzer make	TEI 42i	Analyzer serial #	60475-327

## Calibration Data

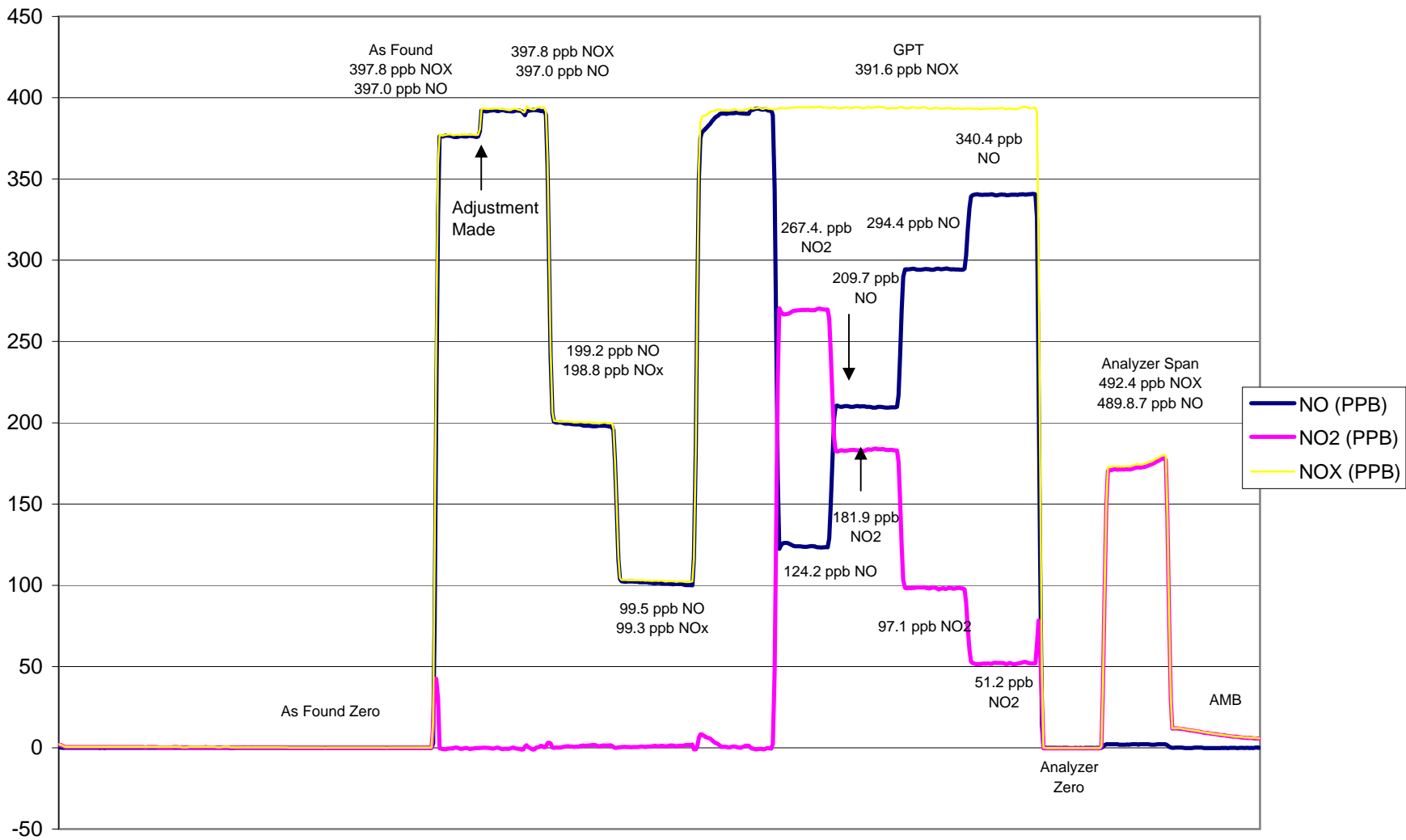
Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999904
397.0	391.8	1.0132		
198.8	199.0	0.9990	Slope	1.014667
99.3	100.9	0.9841		

## NO Calibration Curve





### Beaverlodge NO<sub>x</sub> Calibration



August 13, 2009

# Calibration Report



Parameter 03

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 13, 2009	Previous Calibration	July 13, 2009
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:00	End Time (MST)	14:16
Barometric Pressure	0.917 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.252081	Calculated slope	0.998586
Calculated intercept	-0.654536	Calculated intercept	0.520843
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.80	ppb	-0.90	ppb
slope	1.073		1.014	
Lamp temp	56.3	mV	56.2	mV
Lamp Intensity A/B	70047/69950	mV	71405/70750	mV
Pressure	690.2	mm Hg	690	mm Hg
Flow A	710	ccm	710	ccm
Flow B	662	ccm	663	ccm

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	-0.4	N/A
4990	0.00	269.0	269.3	0.9989
4990	0.00	183.0	182.0	1.0055
4990	0.00	97.9	97.7	1.0018
4990	0.00	0.0	0.4	As found zero
4990	0.00	269.0	284.2	As found span
Average Correction Factor				1.0021

Calculated value of As Found Response: 284.1 ppm      Percent Change of As Found: 5.6%

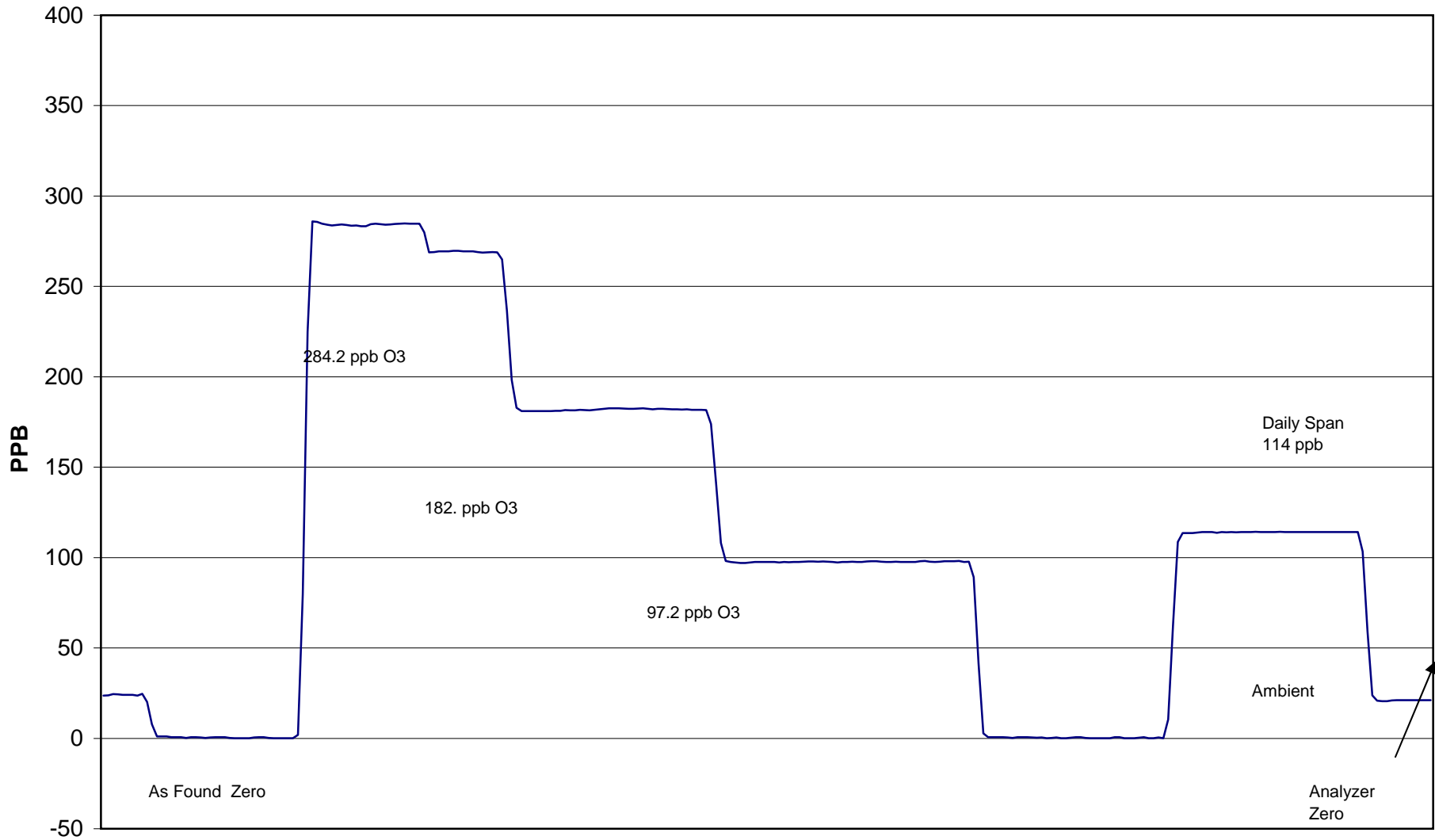
	before calibration		after calibration	
Auto zero	-0.2	ppb	-0.2	ppb
Auto span	122.8	ppb	114.2	ppb

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen



# Beaverlodge O<sub>3</sub> Calibration



August 13, 2009

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	8:30	End Time (MST)	11:15
Barometric Pressure	27.66 inches Hg	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	LL 16161		
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.003476	Calculated slope	1.003309
Calculated intercept	-1.764799	Calculated intercept	-1.799225
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	8.5		8.9	
Coefficient	0.864		0.872	
UV Lamp Voltage	799	V	799	V
Chamber Temp	44.5	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	686.8	mm Hg	687	mm Hg
Sample Flow	0.495	LPM	0.492	LPM
Lamp Intesity	47751	Hz	47693	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.4	N/A
4989	39.83	400.8	400.4	1.0009
4989	19.88	200.8	202.9	0.9898
4989	9.92	100.4	103.2	0.9732
4988	0.00	0.0	-0.1	As found zero
4990	39.89	401.3	398.4	As found span
Average Correction Factor				0.9879

Calculated value of As Found Response: 398.095 ppm      Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	254.1	ppm	254.4	ppm

Notes: Internal Pump Replaced

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



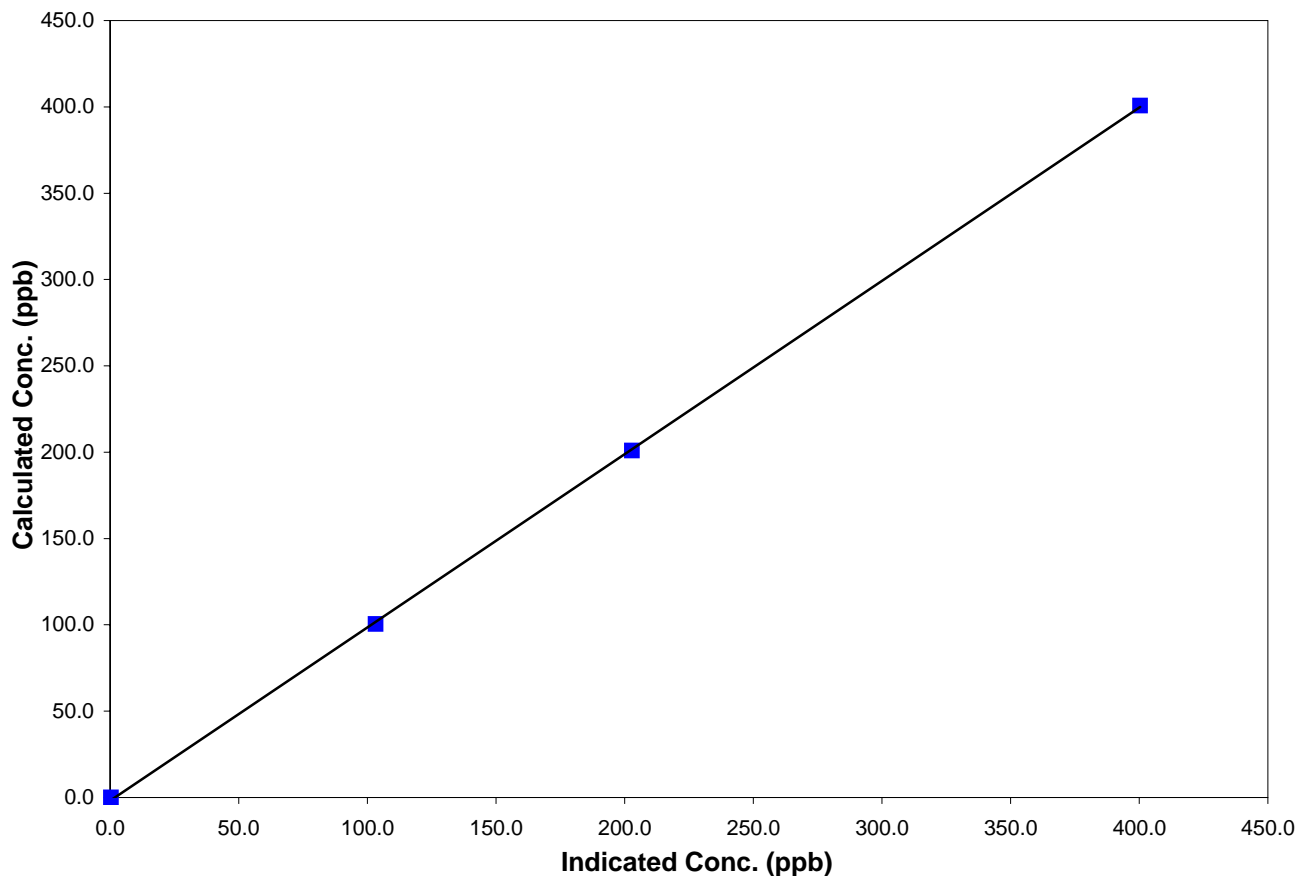
## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	8:30	End Time (MST)	11:15
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

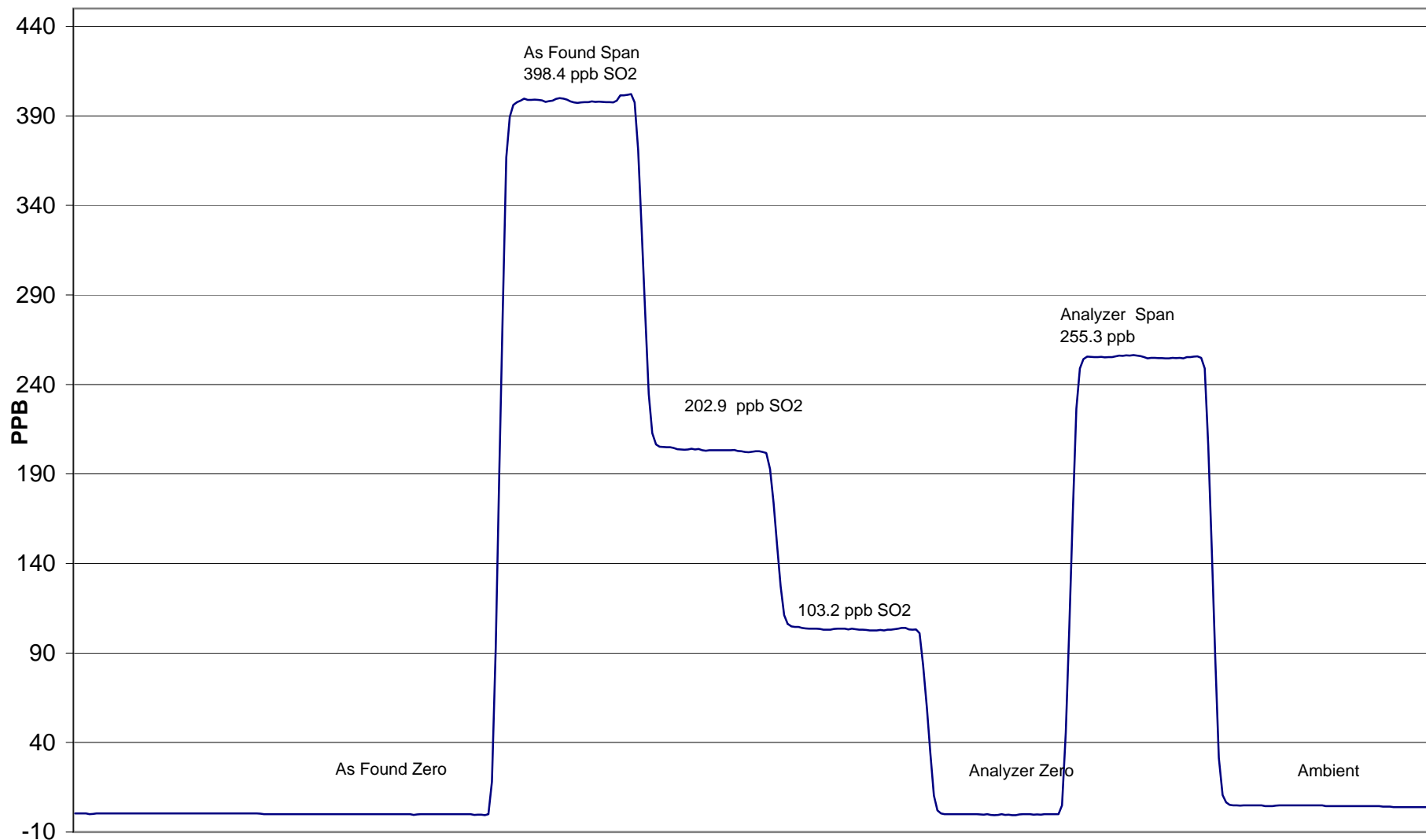
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	400.4	1.0009	Correlation Coefficient	0.999939
200.8	202.9	0.9898		
100.4	103.2	0.9732	Slope	1.003309
			Intercept	-1.799225

## SO2 Calibration Curve



# Kinuso SO<sub>2</sub> Calibration



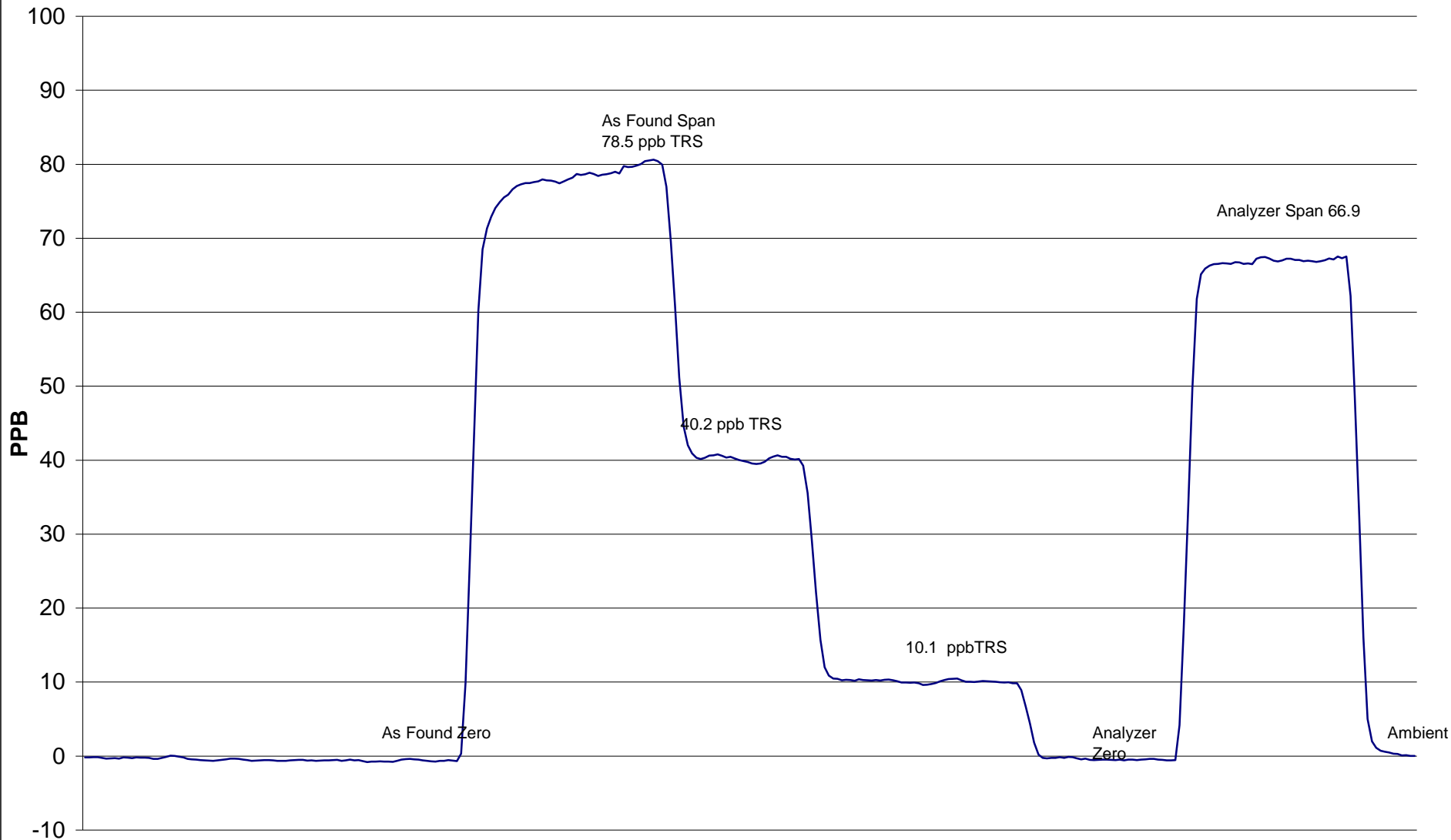
August 28, 2009







# Rover - Kinuso TRS Calibration



August 28, 2009



# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: **August 28, 2009** Station Location: **Rover Kinuso**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4988	0.00	0.0	0.0	0.0	0.2	0.5	-0.7	N/A	N/A
1	4988	39.84	393.0	393.0	0.0	394.4	392.4	-0.9	0.9965	1.0016
2	4988	19.87	196.8	196.8	0.0	201.3	201.3	-1.7	0.9775	0.9776
3	4988	9.91	98.3	98.3	0.0	103.6	104.5	-1.5	0.9493	0.9414
AFZ	4988	0.00	0.0	0.0	0.0	0.1	0.6	-0.9	0.0000	0.0000
AFS	4988	39.84	393.0	393.0	0.0	390.0	387.2	0.0	1.0078	1.0152
Average Correction Factor									0.9744	0.9736

As Found Concentrations: **NO<sub>x</sub>= 386.9** **NO= 382.9** As Found Percent Change **NO<sub>x</sub>= -1.5%** **NO= -2.6%**

## GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.6	0.6	0.0	0.2	0.5	-0.7	N/A	N/A	N/A	N/A
NO point	393.8	393.8	0.0	395.5	393.8	-1.1	0.9956	1.0000	N/A	N/A
300	393.8	184.4	209.3	392.2	184.4	205.5	1.0040	1.0000	1.0185	98.2%
200	393.8	252.5	141.3	394.3	252.5	139.3	0.9987	1.0000	1.0144	98.6%
100	393.8	315.9	77.9	391.4	315.9	73.0	1.0061	1.0000	1.0669	93.7%
50	393.8	350.6	43.2	390.6	350.6	36.9	1.0082	1.0000	1.1691	85.5%
Average Correction Factor							1.0029	1.0000	1.0333	96.8%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	-1.0	0.6	ppb	0.1	-1.0	0.6	ppb
Auto span	305.0	300.2	3.0	ppb	277.9	273.2	3.5	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



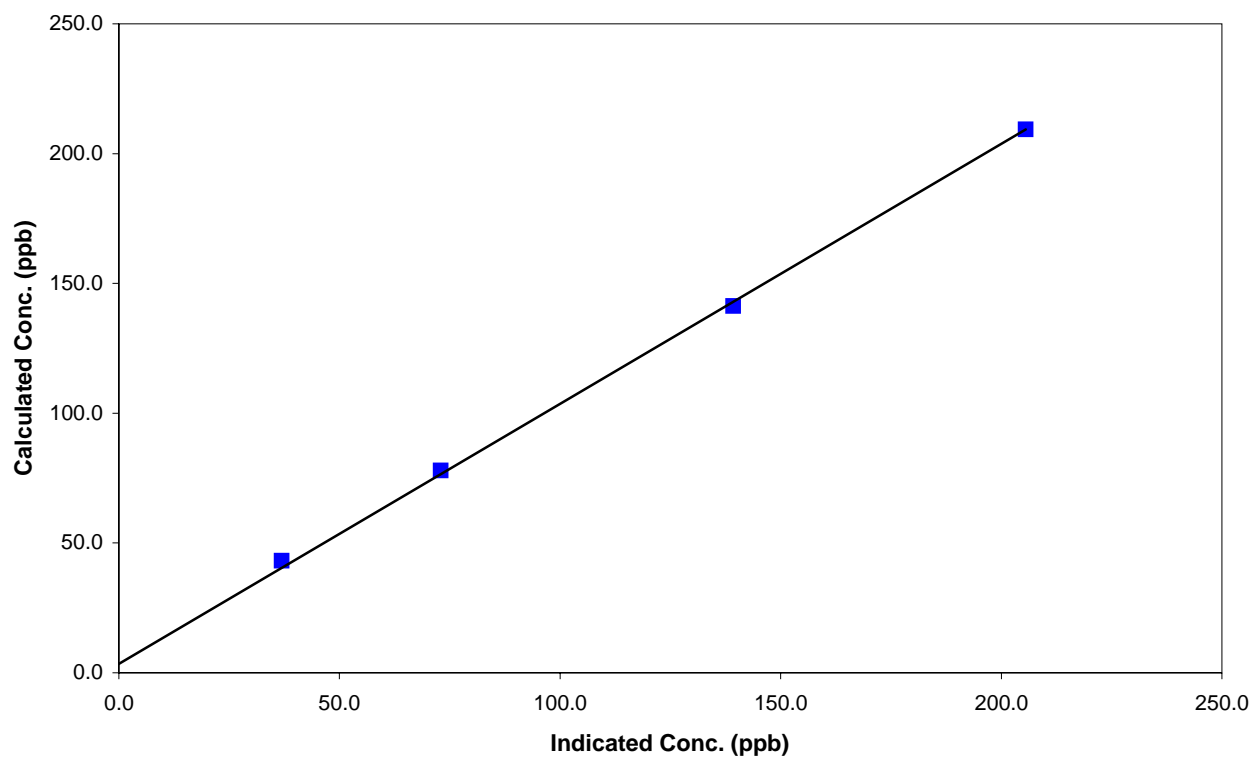
## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:30	End Time (MST)	12:44
Analyzer make	TEI 42i	Analyzer serial #	701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A	Correlation Coefficient	0.999284
209.3	205.5	1.0185		
141.3	139.3	1.0144	Slope	1.001685
77.9	73.0	1.0669		
43.2	36.9	1.1691	Intercept	3.373369

## NO<sub>2</sub> Calibration Curve



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



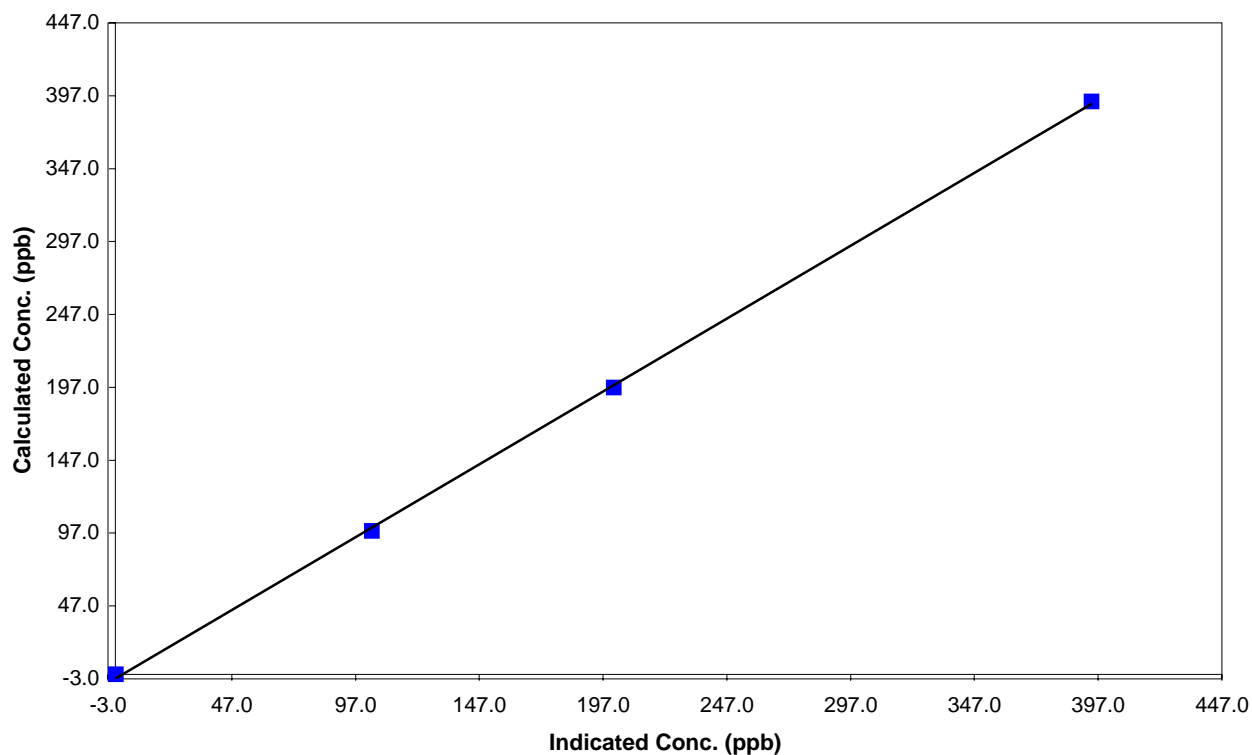
## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:30	End Time (MST)	12:44
Analyzer make	TEI 42i	Analyzer serial #	701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999789
393.0	394.4	0.9965		
196.8	201.3	0.9775		
98.3	103.6	0.9493		
			Slope	0.999867
			Intercept	-2.816954

## NO<sub>x</sub> Calibration Curve



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



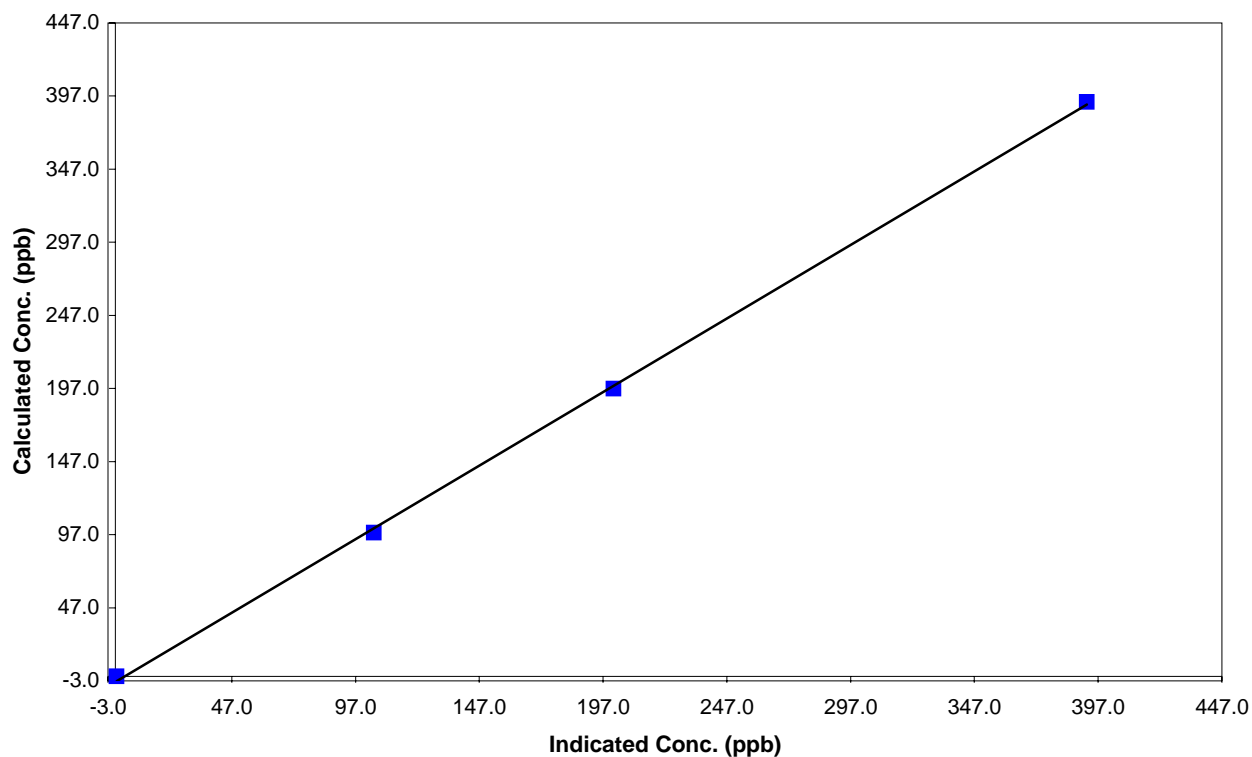
## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	8:30	End Time (MST)	12:44
Analyzer make	TEI 42i	Analyzer serial #	701120011

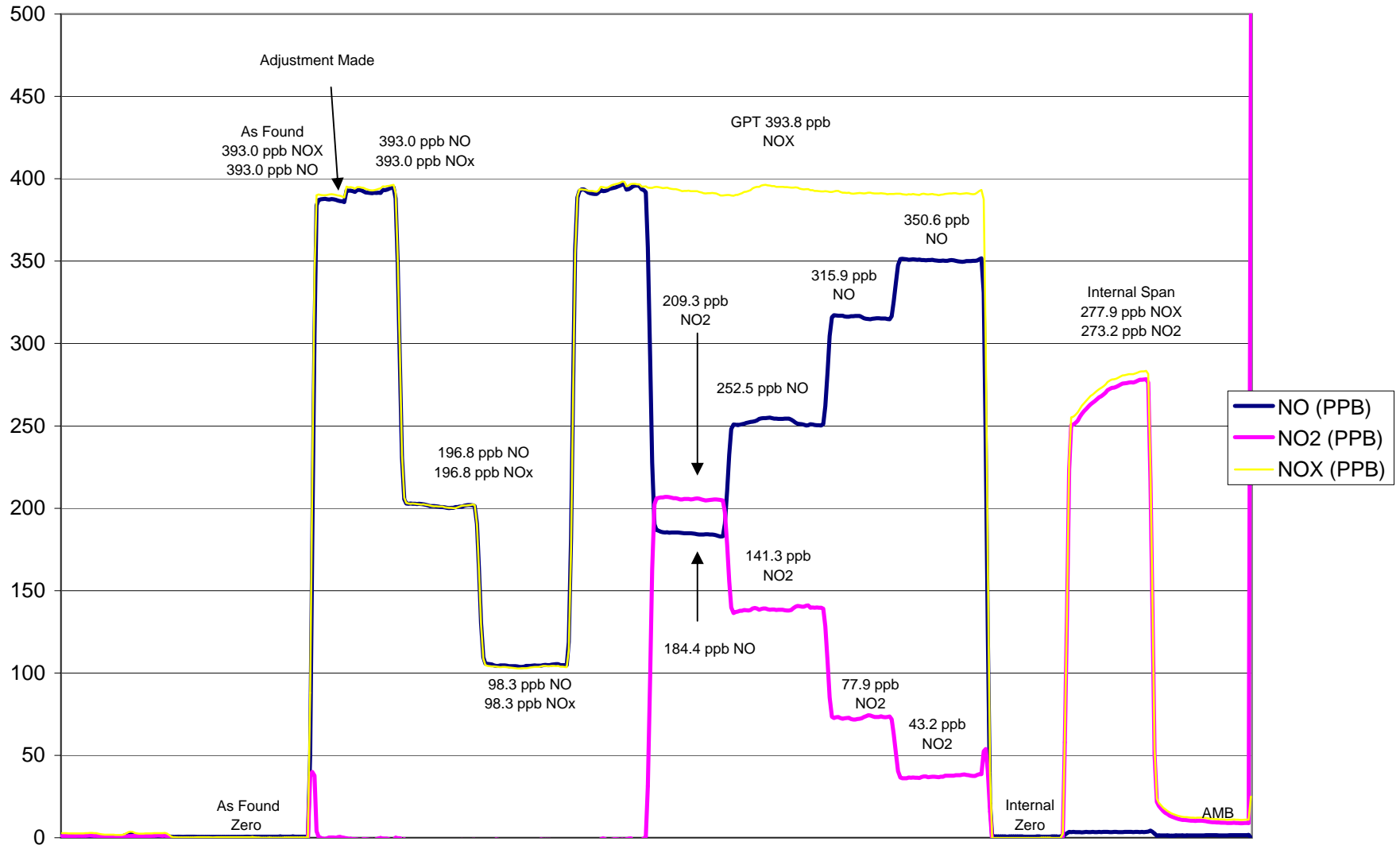
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999675
393.0	392.4	1.0016		
196.8	201.3	0.9776		
98.3	104.5	0.9414	Slope	1.006432
			Intercept	-3.744356

## NO Calibration Curve



# Kinuso NO<sub>x</sub> Calibration



August 28, 2009



# Calibration Report



Parameter 03

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 28, 2009	Previous Calibration	July 24, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	<input type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:

Start Time (MST)	11:20	End Time (MST)	13:40
Barometric Pressure	0.935 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474

DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After

Calculated slope	1.003263	Calculated slope	1.020228
Calculated intercept	0.409852	Calculated intercept	0.278672

Analyzer make	TEI Model 49C	Analyzer serial #	609-716240
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	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.9	ppb	-2.5	ppb
Span	1.558		1.425	
Cell A	95044	Hz	95244	Hz
Cell B	107392	Hz	107378	Hz
Pressure	699	in Hg	694	in Hg
CellA Flow	720	ccm	719	ccm
Cell B Flow	690	cmm	712	cmm

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.0	N/A
4990	0.00	209.3	205.8	1.0170
4990	0.00	141.3	136.6	1.0343
4990	0.00	77.9	76.5	1.0186
4990	0.00	0.0	0.2	As found zero
4990	0.00	209.3	225.4	As found span
Average Correction Factor				1.0233

Calculated value of As Found Response: 226.4 ppm      Percent Change of As Found: 8.2%

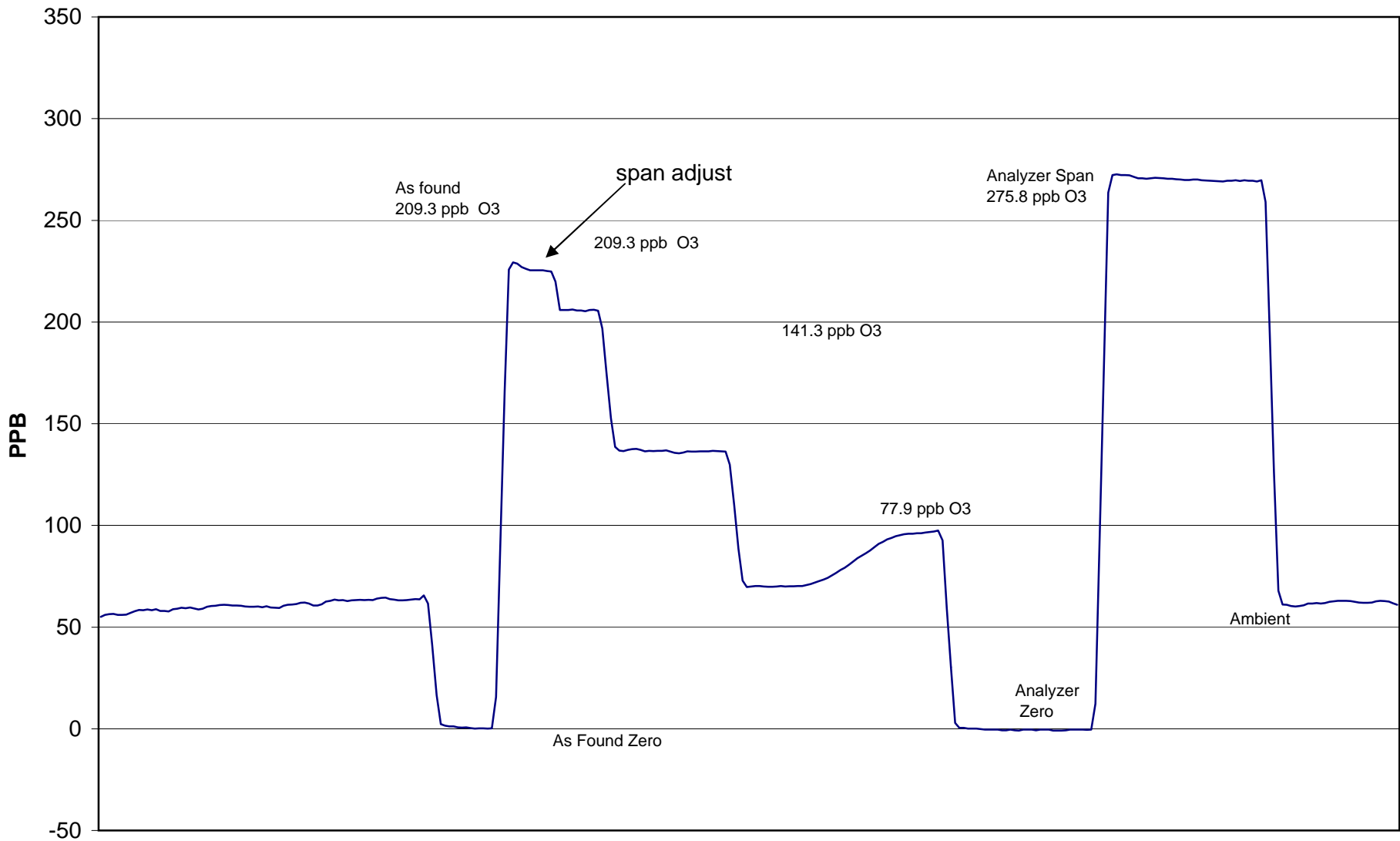
	before calibration		after calibration	
Auto zero	1.2	ppb	-0.2	ppb
Auto span	275.5	ppb	275.7	ppb

Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen



# Kinuso O<sub>3</sub> Calibration



August 28, 2009

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 24, 2009	Previous Calibration	July 19, 2009
Station Number	6	Station Location	Valleyview
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	8:20	End Time (MST)	10:26
Barometric Pressure	29.90 inches Hg	Station Temperature	25.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.006665	Calculated slope	1.000891
Calculated intercept	-1.579462	Calculated intercept	-1.520747
Analyzer make	TEI 45C	Analyzer serial #	43C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	27.8		28.2	
Coefficient	0.713		0.72	
UV Lamp Voltage	696	LPM	695	LPM
Chamber Temp	44	V	44.2	V
Perm Gas Temp	35	C	35.1	C
Pressure	625.2	in Hg	621.4	in Hg
Sample Flow	0.471	LPM	0.47	LPM
Lamp Intesity	45639	Hz	45247	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4989	39.84	400.9	401.4	0.9987
4988	19.92	201.3	203.2	0.9906
4988	9.90	100.2	103.1	0.9720
4988	0.00	0.0	-0.1	As found zero
4988	39.88	401.3	393.2	As found span
Average Correction Factor				0.9871

Calculated value of As Found Response: 394.425 ppm      Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	167.3	ppm	165.2	ppm

Notes:

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



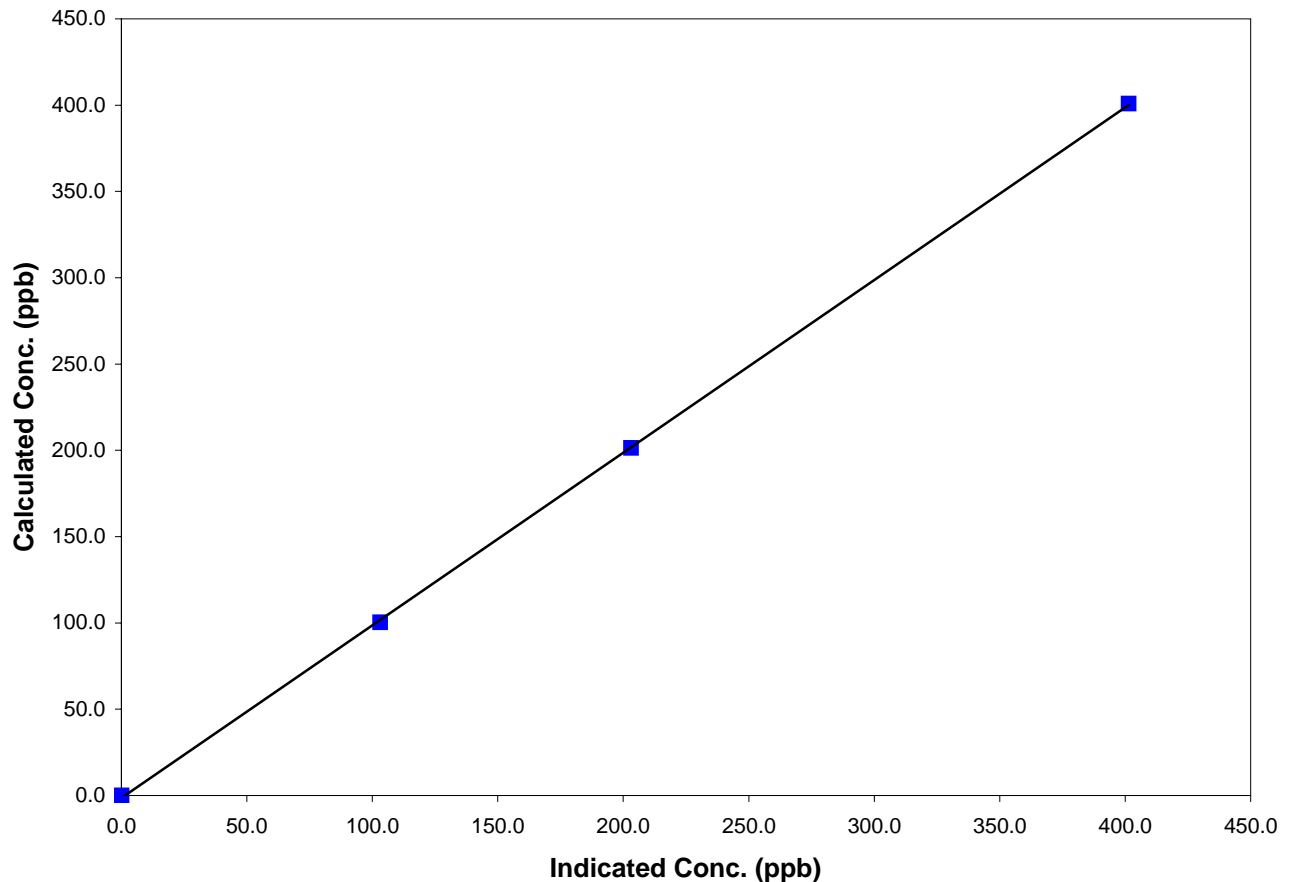
## Station Information

Calibration Date	August 24, 2009	Previous Calibration	July 19, 2009
Station Number	6	Station Location	Valleyview
Start Time (MST)	8:20	End Time (MST)	10:26
Analyzer make/model	TEI 45C	Analyzer serial #	43C-57531-313

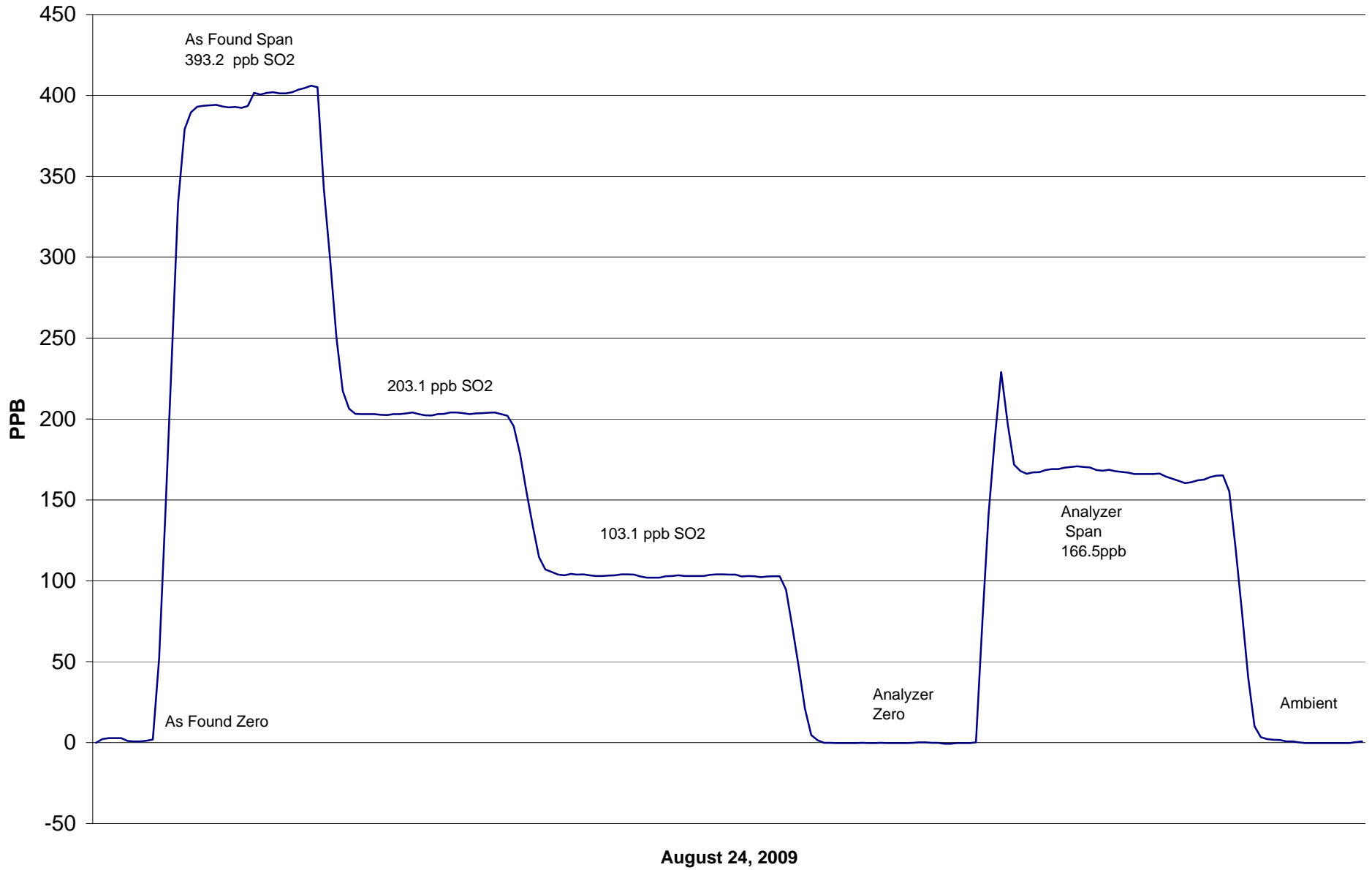
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.9	401.4	0.9987	Correlation Coefficient	0.999946
201.3	203.2	0.9906		
100.2	103.1	0.9720	Slope	1.000891
			Intercept	-1.520747

## SO2 Calibration Curve



# Valleyview SO<sub>2</sub> Calibration









# Valleyview H<sub>2</sub>S Calibration

